ORGANIZATIONAL, INTERMEDIATE, AND DEPOT MAINTENANCE

DESCRIPTION AND PRINCIPLES OF OPERATION

NES-25A PERSONNEL PARACHUTE ASSEMBLY

PART NO. 926AS104-6

LS-1 DROGUE PARACHUTE ASSEMBLY PART NO. 1.9083GR-3

List of Effective Work Package Pages

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Record of Applicable Technical Directives

None

1. DESCRIPTION.

2. GENERAL. The NES-25A Personnel Parachute Assembly and LS-1 Drogue Parachute Assembly are part of the North American Aviation LS-1 Ejection Seat Escape System and are designed for use with a PCU-33/P or PCU-56/P Parachute Restraint Harness (Figure 1 and 2).

3. The LS-1 drogue parachute is used to decelerate and stabilize the ejection seat and to position the seat in the proper attitude for aircrew/seat separation.

4. The drogue parachute is 52-in. in diameter, made of nylon fabric and constructed in a ribless type surface. The drogue canopy consists of 12 gores and 12 suspension lines. The drogue risers are made of nylon webbing whose ends are covered with leather buffers. The drogue parachute is stowed in the ejection seat headrest and is attached to the seat by its four risers.

5. The NES-25A Personnel Parachute includes a multicolored (white, olive green, international orange, and sand shade), 28 ft. diameter, flat, circular, nylon canopy with 28 gores modified with water deflation pockets and spreading gun loops. The canopy is packed in a nylon fabric container. An automatic parachute ripcord release (APRR) is used to open the container and a ballistic spreading gun is used to rapidly extend the canopy skirt hem during deployment. The riser assembly includes shoulder harness fittings used with the ejection seat restraint system and two canopy release fittings or parachute harness sensing release units which attach to two adapters on the PCU-33/P or PCU-56/P Parachute Restraint Harness. The container also incorporates a lapbelt assembly used with the ejection seat restraint system and to provide attachment points for the seat survival system.

6. CONFIGURATIONS. The only authorized configurations for the NES-25A and the LS-1 Parachute Assemblies are shown in (Figures 1 and 2). Refer to Illustrated Parts Breakdowns WP 020 04 and WP 021 03 for exact configuration requirements.

7. SUBASSEMBLY CONFIGURATIONS. The subassemblies listed below make up the NES-25A assembly and are shown in (Figure 3). Refer to WP 020 04 for detailed information on subassemblies.

Pilot Parachute

Bridle Line

Riser Assemblies

Connector Straps

Ripcord Assembly

Back Pad

Line Stowage Sleeve Assembly

Automatic Parachute Ripcord Release

Spreading Gun Assembly

Canopy Assembly

Container Assembly

Parachute Harness Sensing Release Units

8. PRINCIPLES OF OPERATION.

NOTE

The LS-1 Ejection Seat Escape System is designed to initiate seat/man separation at 13,000 feet or 0.5 seconds after ejection if below 13,000 feet.

9. AUTOMATIC OPERATION ABOVE 13,000 FT. ALTITUDE. When an aircrew ejects above the predetermined aircrew/seat separation altitude (13,000 ± 1,000 ft.), the following functions take place:

a. As ejection sequence is initiated and the ejection seat begins to travel, a bell crank arm contacts a striker pin on the cockpit structure. The drogue gun fires and deploys the drogue parachute. The drogue parachute stabilizes the seat as the aircrew/seat combination free falls to aircrew/seat separation altitude.

b. When the aircrew/seat separation altitude is reached, the seat aneroid power device initiates aircrewmember/seat separation by actuating the harness release thruster, releasing the lap and shoulder fittings. Immediately after harness release, the separation bladders installed behind the parachute and under the survival kit inflate forcibly thrusting the aircrew forward and upward from the seat.

c. As the aircrew separates from the seat, the ripcord release arming cable is withdrawn, arming the release.

d. The aircrew may free fall until increasing air pressure causes the ripcord release aneroid to contract. As the pre-set altitude is reached, the aneroid has contracted sufficiently to allow the firing pin and hammer to unlock.

e. The hammer firing pin strikes the cartridge.

f. The cartridge fires after a 0.575 sec time delay.

g. The piston is forced forward in the release barrel, pulling the ripcord cable which is attached to the top ripcord pin. The ripcord pins are pulled, allowing the container grommets and locking cones to separate.

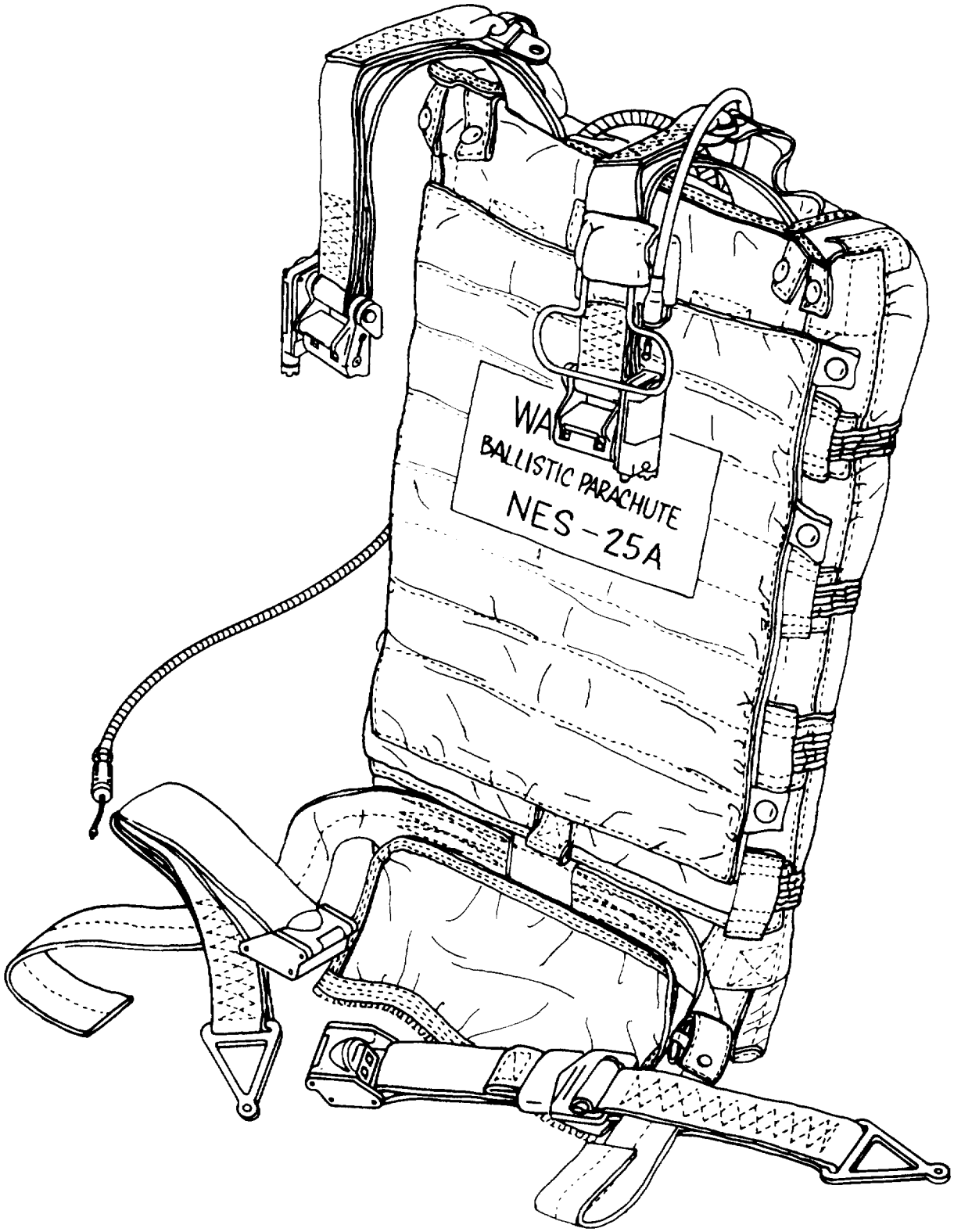

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Figure 1. Personnel Parachute Assembly, NES-25A

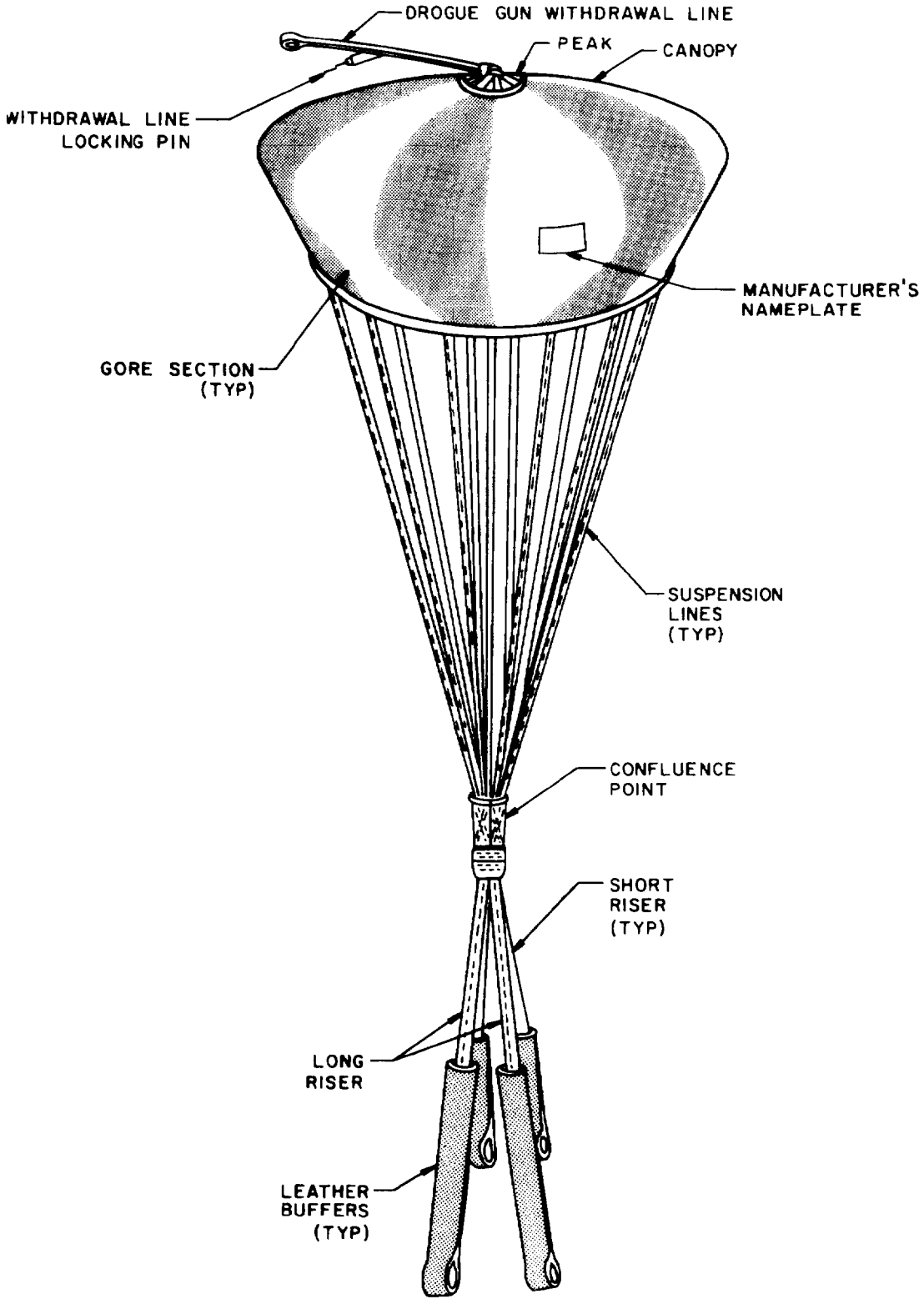

Figure 2. Drogue Parachute Assembly, LS-1

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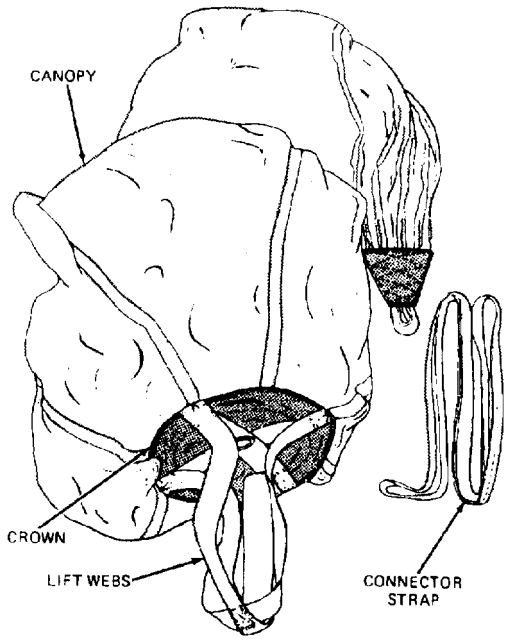
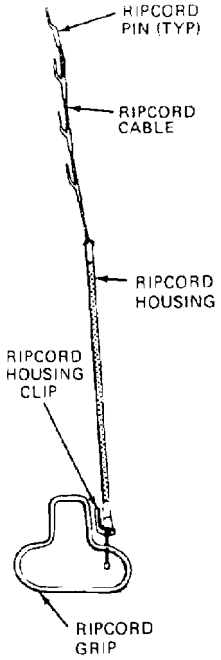
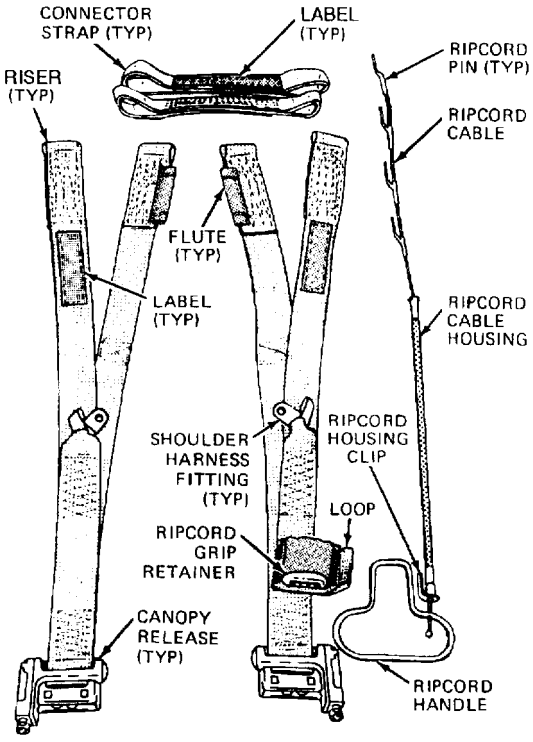


Pilot Parachute and Connector Strap



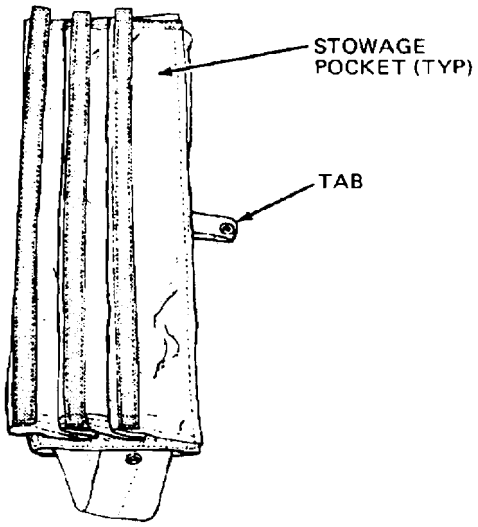
Ripcord Assembly



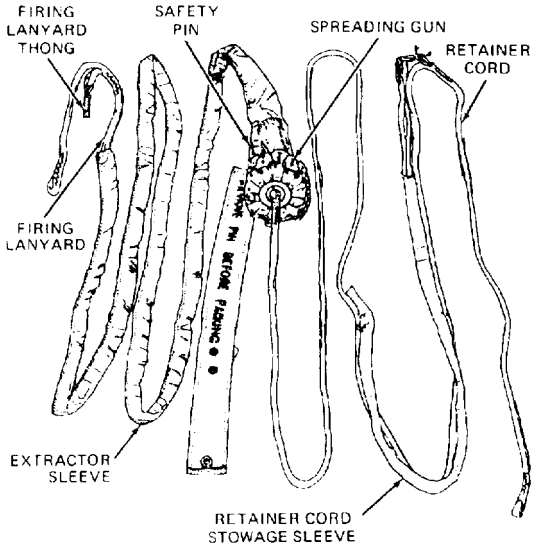
Riser Assemblies and Connecor Straps

Back Pad

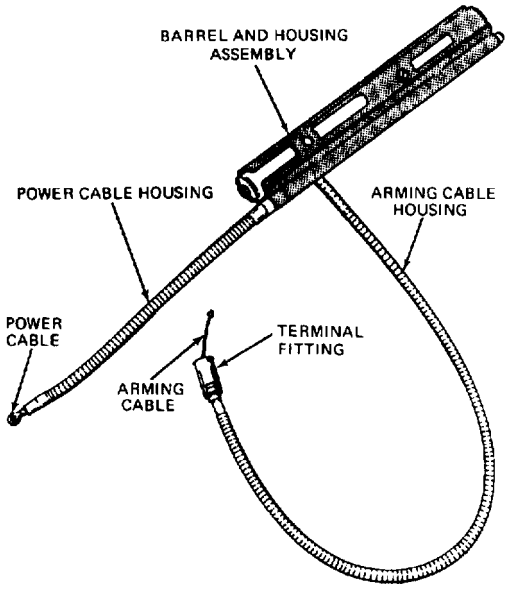
Figure 3. Subassemblies, NES-25A (Sheet 1 of 4)



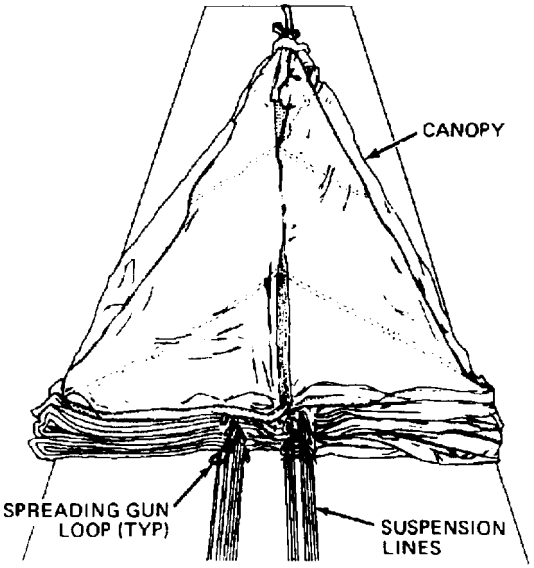
Line Stowage Sleeve Assembly



Spreading Gun Assembly



Automatic Parachute Ripcord Release



Canopy Assembly

Figure 3. Subassemblies, NES-25A (Sheet 2 of 4)

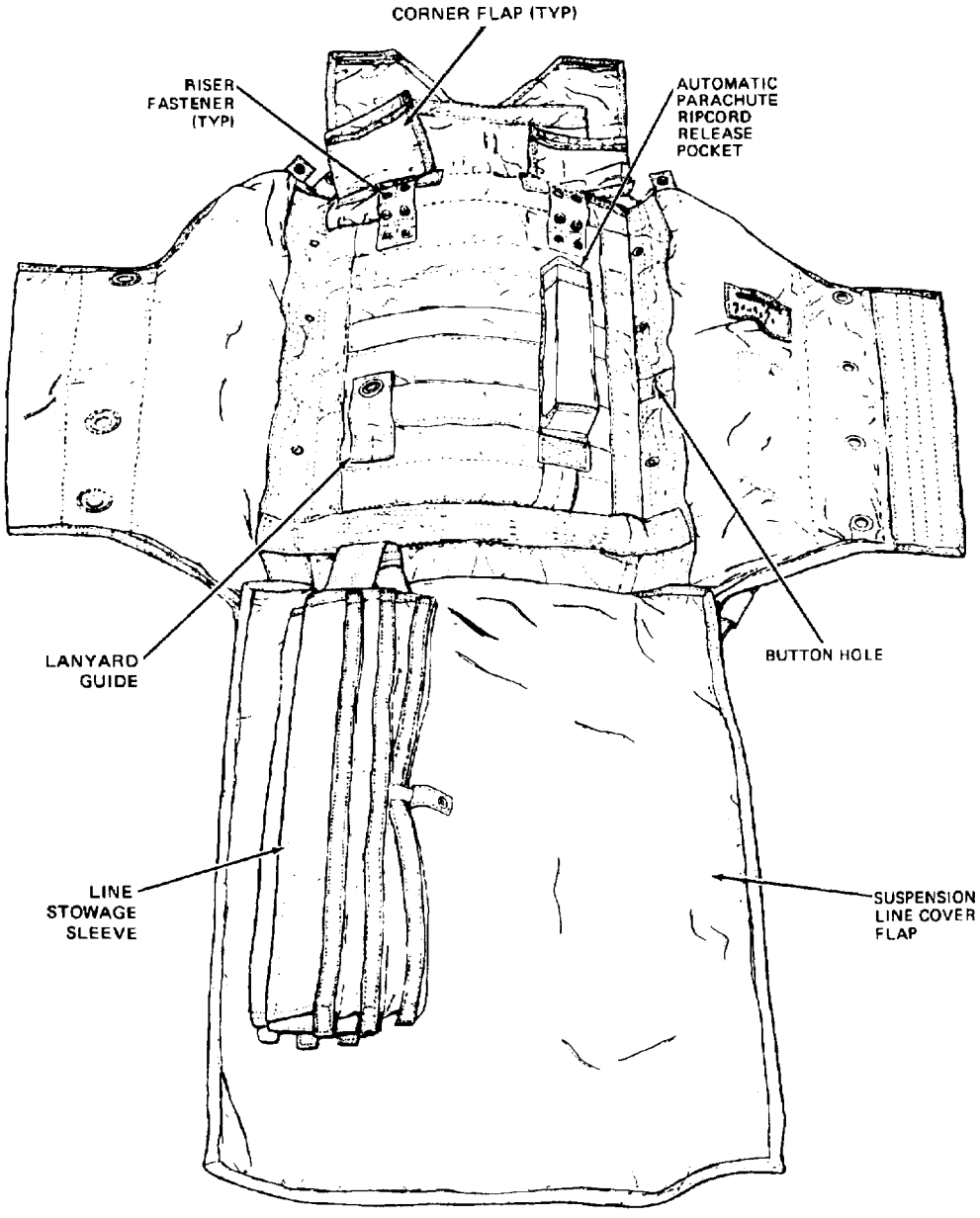


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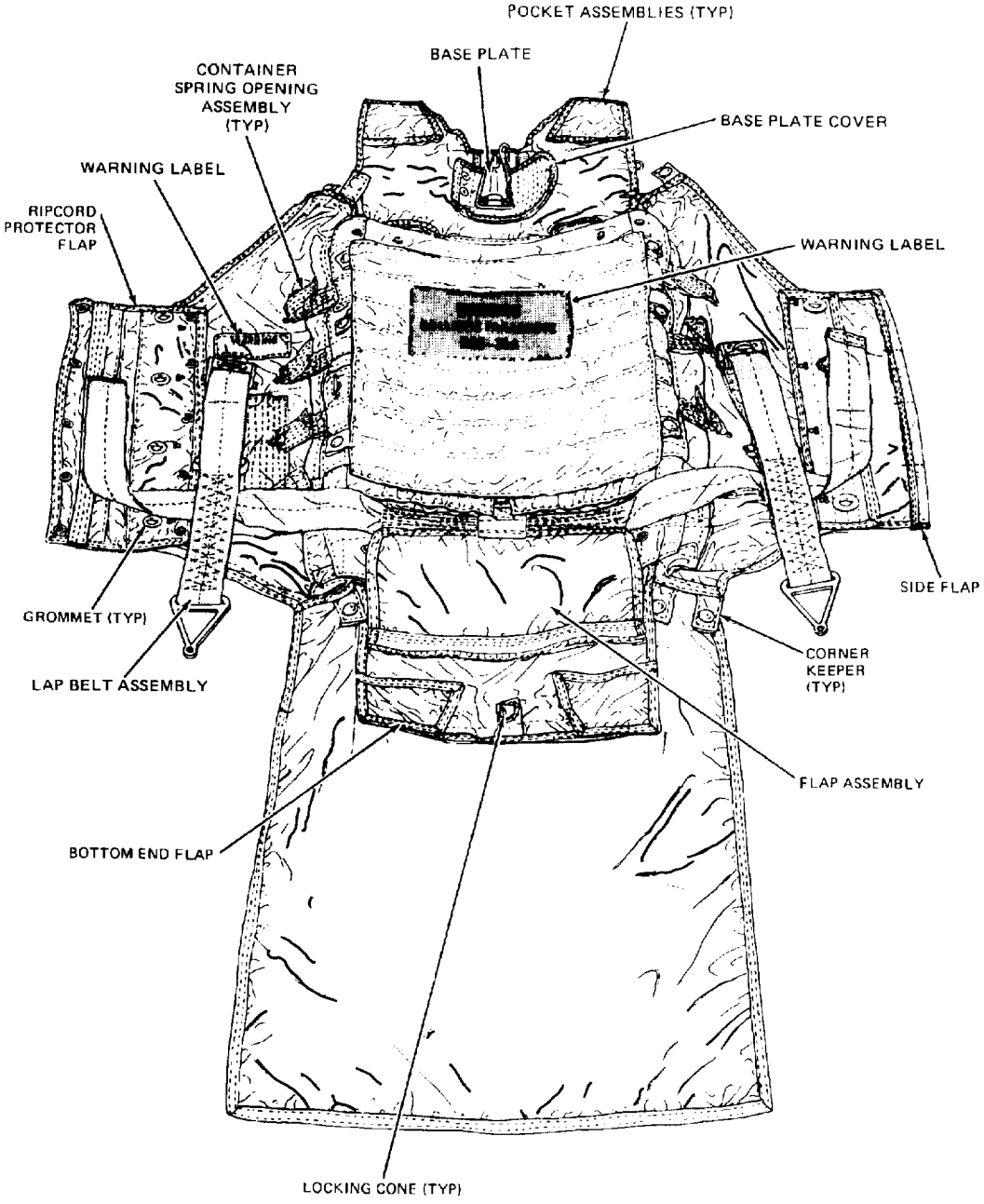
Figure 3. Subassemblies, NES-25A (Sheet 3 of 4)



Container Assembly (outside)

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Figure 3. Subassemblies, NES-25A (Sheet 4 of 4)

h. The container spring opening assemblies pull the side flaps apart, allowing the internal pilot parachute to spring from the container and inflate.

i. The aircrew falling away from the pilot parachute causes the canopy to be pulled from the container, followed by the suspension lines.

j. Just prior to full canopy and suspension line deployment, the spreading gun firing lanyard pulls the firing pin from the firing mechanism. This releases the striker which, under spring pressure, strikes and initiates the cartridge.

k. Gas pressure from cartridge forces out the internal pistons propelling the slugs outward. The slugs simultaneously drag the attached suspension lines outward in a 360-degrees spread, allowing a more rapid opening of the canopy.

l. In the event of a spreading gun malfunction, a fail-safe backup subsystem operates. After the firing pin is withdrawn, tension on the firing lanyard is exerted on the fail-safe assembly sleeve which retracts the shear band assembly. This releases the slugs and allows the canopy to inflate aerodynamically.

m. As load is applied, the riser fasteners disengage from the container and the connector link ties break. The releasable clamp lanyard is pulled from the base plate stud, releasing the clamp and freeing the ripcord and power cable housing. Full deployment of the parachute then occurs. The aircrewmember descends suspended in the PCU-33/P or PCU-56/P Parachute Restraint Harness.

n. During descent, the aircrew may manually actuate the four-line release system which will reduce oscillation and allow the aircrew to maneuver the parachute to a less hazardous landing site.

o. Upon landing, the aircrew releases the parachute from the PCU-33/P or PCU-56/P Parachute Restraint harness by actuation of the canopy release fittings.

p. The parachute harness sensing release unit provide an automatic backup method of releasing the risers after the aircrew makes a seawater entry.

10. AUTOMATIC OPERATION BELOW 13,000 FT. ALTITUDE. When an aircrew ejects below the predetermined aircrew/seat separation altitude (13,000 ± 1,0000 ft.) the following functions take place:

a. As ejection sequence is initiated and the ejection seat begins to travel, a bell crank arm contacts a striker pin on the cockpit structure. The drogue gun fires and deploys the drogue parachute. The drogue parachute stabilizes the seat for aircrew/seat separation.

b. The seat aneroid power device initiates aircrew/seat separation by actuating the harness release thruster, releasing the lap and shoulder fittings. Immediately after harness release, the separation bladders installed behind the parachute and under the survival kit inflate forcibly thrusting the aircrew forward and upward from the seat.

c. As the aircrew separates from the seat, the ripcord release arming cable is withdrawn, arming the release.

d. The hammer firing pin strikes the cartridge.

e. The cartridge fires after a 0.575 sec. time delay.

f. The piston is forced forward in the release barrel, pulling the ripcord cable which is attached to the top ripcord pin. The ripcord pins are pulled, allowing the container grommets and locking cones to separate.

g. The container spring opening assemblies pull the side flaps apart allowing the pilot parachute to spring from the container and inflate.

h. The aircrew falling away from the pilot parachute causes the canopy to be pulled from the container, followed by the suspension lines.

i. Just prior to full canopy and suspension line deployment, the spreading gun firing lanyard pulls the firing pin from the firing mechanism. This releases the striker which under spring pressure, strikes and initiates the cartridge.

j. Gas pressure from the cartridge forces out the internal pistons propelling the slugs outward. The slugs simultaneously drag the attached suspension lines outward in a 360-degrees spread, allowing a more rapid opening of the canopy.

k. In the event of a spreading gun malfunction, a fail-safe backup subsystem operates. After the firing pin is withdrawn, tension on the firing lanyard is exerted on the fail-safe assembly sleeve which retracts the shear band assembly. This releases the slugs and allows the canopy to inflate aerodynamically.

l. As load is applied, riser fasteners disengage from container and the connector link ties break. The releasable clamp lanyard is pulled from base plate stud, releasing the clamp and freeing the ripcord and power cable housing. Full deployment of the parachute then occurs. The aircrew descends suspended in the PCU-33/P or PCU-56/P Parachute Restraint Harness.

m. During descent, the aircrew may manually actuate the four-line release system which will reduce oscillation and allow the aircrew to maneuver the parachute to a less hazardous landing site.

n. Upon landing, the aircrew releases the parachute from the PCU-33/P or PCU-56/P Parachute Restraint harness by actuation of the canopy release.

o. The parachute harness sensing release units provide an automatic backup method of releasing the risers after the aircrew makes a seawater entry.

11. MANUAL OPERATION. Manual operation of the parachute assembly is necessary when the ejection seat emergency restraint release is used as an emergency exit control, leaving the seat in the aircraft, which prevents the arming of the automatic parachute release. In addition, if the ripcord release fails after aircrew/seat separation during the ejection sequence, manual operation is required. If manual operation is initiated, the following functions take place:

a. Manually pulling the ripcord grip removes the ripcord pins from the container locking cones, permitting grommets and locking cones to separate.

b. The container spring opening assemblies pull the side flaps apart allowing the pilot parachute to spring from the container and inflate.

c. The aircrew falling away from the pilot parachute causes the canopy to be pulled from the container followed by the suspension lines.

d. Just prior to full canopy and suspension line deployment, the spreading gun firing lanyard pulls the firing pin from the firing mechanism. This releases the striker which, under spring pressure, strikes and initiates the cartridge.

e. Gas pressure from cartridge forces out the internal pistons propelling the slugs outward. The slugs simultaneously drag the attached suspension lines outward in a 360-degrees spread, allowing a more rapid opening of the canopy.

f. In the event of a spreading gun malfunction, a fail-safe backup subsystem operates. After the firing pin is withdrawn, tension on the firing lanyard is exerted on the fail-safe assembly sleeve which retracts the shear band assembly. This releases the slugs and allows the canopy to inflate aerodynamically.

g. As load is applied, the riser fasteners disengage from the container and the connector link ties break. The releasable clamp lanyard is pulled from the base plate stud, releasing the clamp and frees the ripcord and power cable housing. Full deployment of the parachute then occurs. The aircrew descends suspended in the PCU-33/P or PCU-56/P Parachute Restraint Harness.

h. Upon landing, the aircrew disengages the parachute assembly from the PCU-33/P/P or PCU-56/P Parachute Restraint Harness by actuating the canopy release assembly.

i. The parachute harness sensing release units provide an automatic backup method of releasing the risers after the crew makes a seawater entry.

12. REPACK SCHEDULE.

a. Schedule repack cycle is 448 days. ■

ORGANIZATIONAL MAINTENANCE

REPAIR PROCEDURES

NES-25A PERSONNEL PARACHUTE ASSEMBLY

PART NO. 926AS104-6

List of Effective Work Package Pages

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Reference Material

Aviation-Crew Systems, Seat Survival Kits (SKU-Series Seat Kits) . . . . . NAVAIR 13-1-6.3-2
Intermediate and Depot Maintenance, Maintenance Procedures, Parachute Harness Sensing Release Units (PHSRU) MXU-746/P and MXU-747/P . . . . . WP 024 02
Introduction, Organizational, Intermediate and Depot Maintenance with Illustrated Parts Breakdowns, Emergency Personnel and Drogue Parachute Systems . . . . . WP 002 00

Alphabetical Index

Record of Applicable Technical Directives

None

1. INTRODUCTION.

a. This Work Package (WP) contains instructions for organizational level repair to ensure that the parachute assembly remains in Ready-For-Issue (RFI) status.

b. When performing repairs detailed in this WP, follow these guidelines:

(1) Review all applicable instructions prior to starting repair.

(2) Ensure that all necessary support equipment and materials required are available prior to starting repair.

(3) When required remove enough material from its source for immediate use only. Ensure that the material identification ticket remains with the source material at all times. Material that cannot be identified will not be used.

(4) To ensure conformity, all repair work shall be carefully inspected and compared to applicable instructions at completion of work.

(5) A Quality Assurance (QA) inspector shall examine the finished work.

2. RISER ASSEMBLY.

3. REPLACEMENT OF RIPCORD HOUSING CLIP TACKING.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size E, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. If necessary, reinsert ripcord housing clip into webbing loop attached to riser (Figure 1).

b. Tack thru loop and thru hole in housing clip with one turn of size E thread, single and waxed; tie off (Figure 1). (QA)

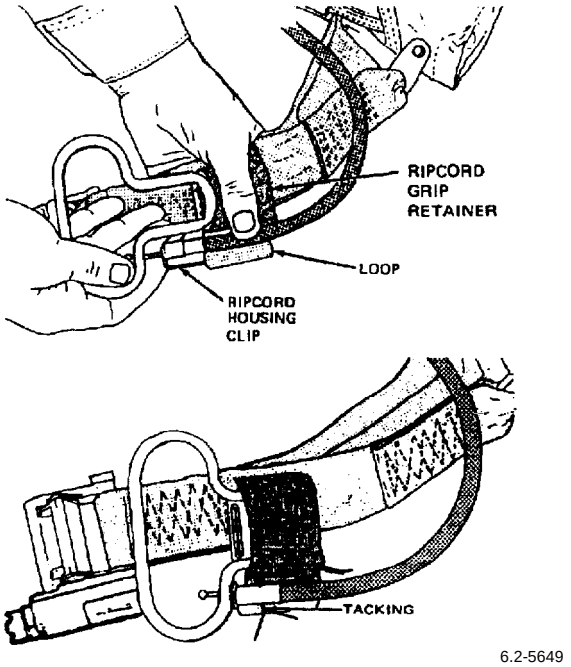

Figure 1. Ripcord Housing Clip Tacking Replacement

c. Insert ripcord grip into retainer.

4. CONTAINER ASSEMBLY.

5. REPLACEMENT OF RIPCORD PIN RETENTION TIE.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size E, Type I or II, Class A

a. Completely remove broken retention tie from ripcord pin and cable.

b. Loop a 12-in. length size E thread, single and waxed, under bottom ripcord pin. Secure by bringing thread ends together and forming 3 to 5 half-hitches above ripcord pin ferrule. Top off with a binders knot (Figure 2).

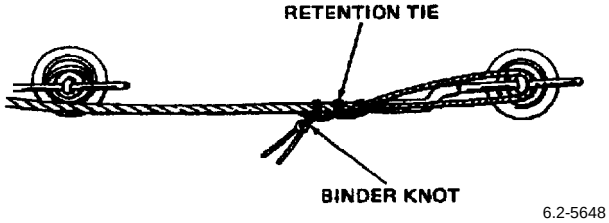

Figure 2. Ripcord Pin Retention Tie Replacement

c. Trim excess thread 1/2-in. from knot.

6. REPLACEMENT OF SPRING OPENING ASSEMBLY.

a. Measure length of replacement spring opening assembly. Required length is 10 3/8 ±1/4-in. when measured from end of one hook to end of other hook with no tension applied.

b. Inspect spring opening assembly for broken spring, contamination, corrosion, cuts, fraying, bent or broken hooks, elasticity and loose or broken stitching.

c. Remove back pad from container.

d. Remove defective spring opening assembly from eyelet on container centerline.

e. Attach hook of defective spring opening to hook of replacement spring opening assembly at pull tab end. Pull replacement spring opening assembly thru channel while removing defective spring opening assembly.

f. Attach hook of replacement spring opening assembly with hook facing down to eyelet on container centerline. Crimp hook to eyelet.

g. Attach remaining hook to corresponding eyelet on container.

h. Attach back pad to container.

7. REPLACEMENT OF RELEASE LANYARD LOCKING PIN SAFETY TIE.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size FF, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Completely remove loose or broken safety tie.

b. Tie locking pin to stud with one turn of size FF thread, single and waxed. Pass thread thru lanyard knot; tie off (Figure 3).

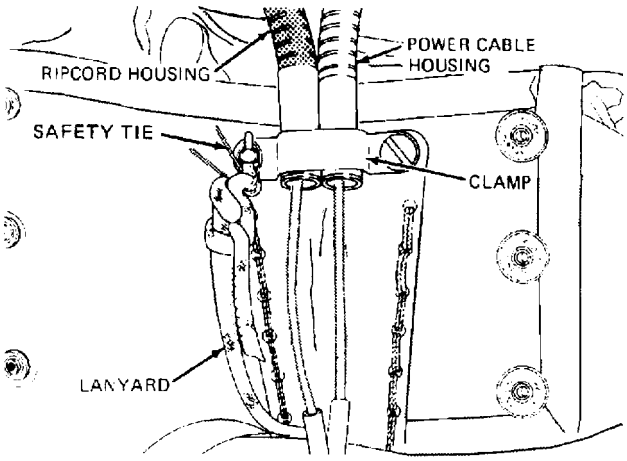

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Figure 3. Release Lanyard Locking Pin Safety Tie Replacement

8. LAP BELT ASSEMBLY.

9. REPLACEMENT OF LAP BELT RELEASE ASSEMBLY.

Materials Required

Specification or Part Number	Nomenclature
MIL-S-22473	Sealing, Compound, Grade H

a. Remove two shoulder screws. Pull release assembly away from webbing and slide pin out of harness webbing loop.

b. Inspect new release assembly for operation, corrosion, burrs, and sharp edges.

c. Insert new pin into webbing loop.

d. Apply sealing compound to threads of two shoulder screws. Install screws thru holes in release assembly and into pin (Figure 4).

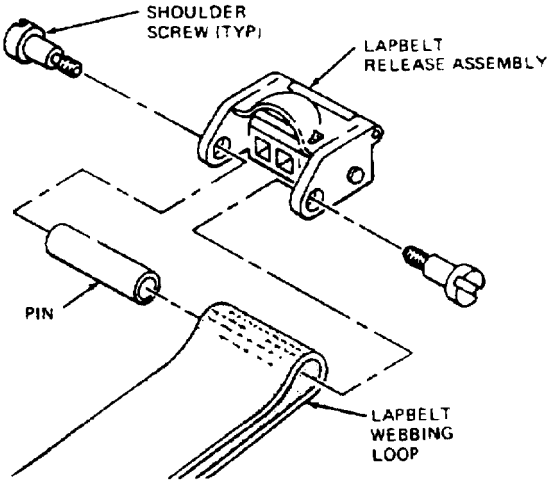

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Figure 4. Lap Belt Release Assembly Replacement

10. SURVIVAL KIT.

11. REPLACEMENT OF RSSK-3 SURVIVAL KIT.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Ensure survival kit has been inspected per NAVAIR 13-1-6.3-2.

b. Position packed parachute assembly on table with back pad facing up. Position RSSK-3 survival kit on table so that attaching flaps of survival kit and parachute face each other.

c. Attach parachute survival kit by mating slide fastener. Tack slider tab to attaching flap on parachute container with two turns of size 6 thread single and waxed; tie off (Figure 5).

d. Ensure retention straps on left side are inboard of oxygen hose connection of survival kit container.

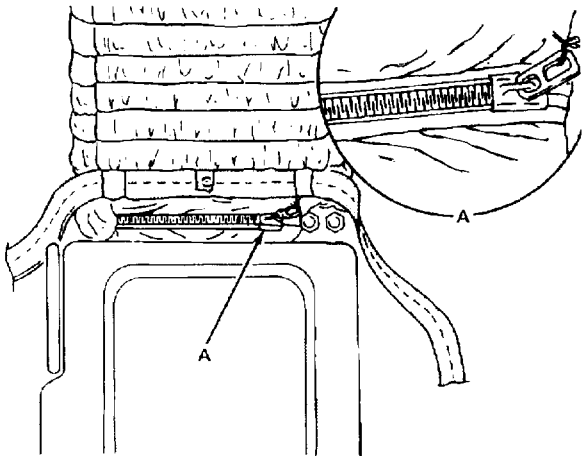

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Figure 5. Attach Parachute Survival Kit

e. Reeve kit retention straps on parachute thru adapters on survival kit. Reeve straps back thru adapters to obtain 5 to 6 in. of straps between center of adapter and lapbelt. Fold free ends of straps under and wedge straps down to buckle. Tack fold of strap to strap underneath with two turns of size 6 thread, single and under waxed; tie off (Figure 6).

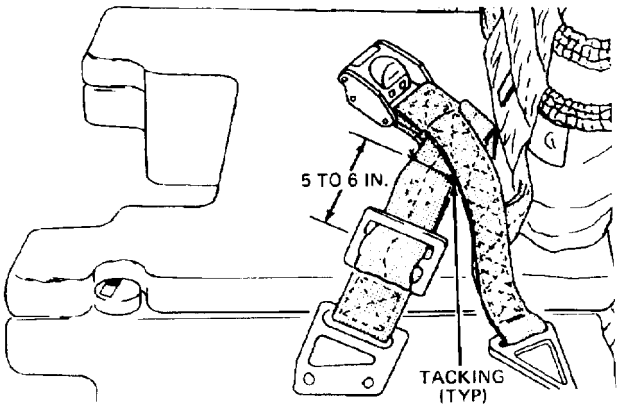

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Figure 6. Reeve Kit Retention Straps Thru Adapters

12. REPLACEMENT OF SLIDER TAB AND RETENTION STRAP TACKINGS.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Completely remove loose or broken tacking(s).

b. Replace slider tab tacking by tacking tab to flap with two turns of size 6 thread, single and waxed; tie off per Paragraph 11, Step c.

c. Replace retention strap tackings with two turns of size 6 thread, single and waxed; tie off per Paragraph 11, Step e.

13. STOWAGE OF SPREADING GUN SAFETY PIN FLAG.

a. Position spreading gun safety pin flag on table with securing strap facing down and safety pin as shown. Fold flag with safety pin tucked inside so that securing strap faces up (Figure 7).

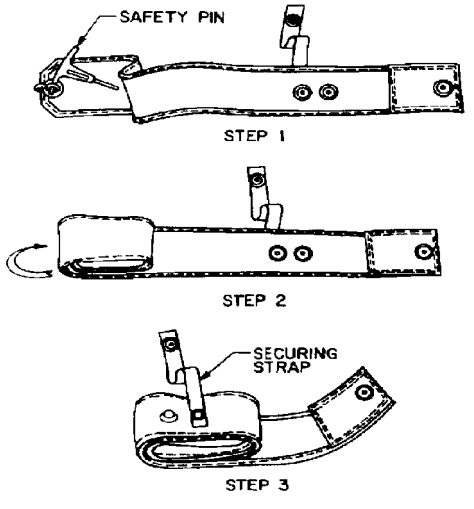


Figure 7. Positioning of Spreading Gun Safety Pin Flag

b. When flag is completely folded, pass securing strap around left kit retention strap between container and lapbelt (ripcord handle side). Close snap fastener. Close flag snap fastener (Figure 8). (QA)

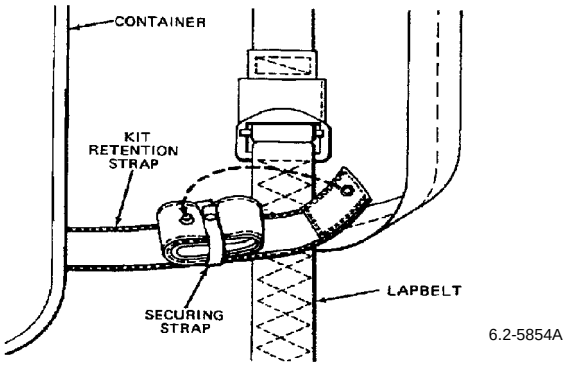


Figure 8. Securing of Safety Pin Flag

14. PARACHUTE HARNESS SENSING RELEASE UNIT (PHSRU).

15. REPLACEMENT OF PHSRU TORQUE SEAL.

Materials Required

Specification or Part Number	Nomenclature
F-900 Torque Seal (Color Optional)	Sealing Compound

a. Torque loose screws to a value of 11 to 13 in-lbs.

b. Apply torque seal to the plug assembly, sensor plug and electronics package assembly attaching screws (Figure 9).

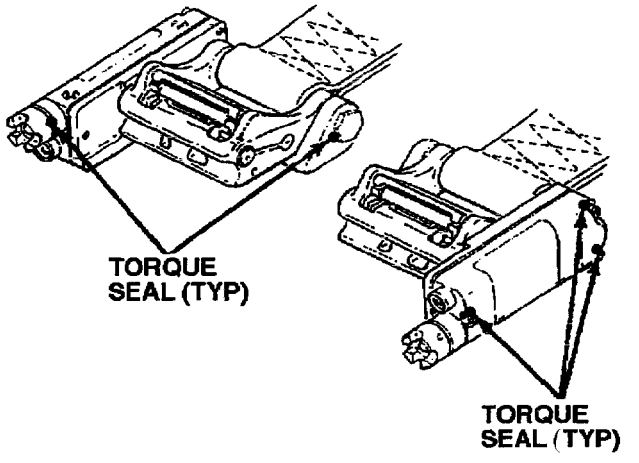


Figure 9. Replacement of Torque Seal on PHSRU

16. REPLACEMENT OF PHSRU BATTERY AND SENSOR PLUG.

Support Equipment Required

Specification or Part Number	Nomenclature
FLUKE-77	Multimeter
SA852AS112	Torque Driver
SA852AS113	Torque Tool, Sensor Plug
GGG-W-641	Socket Handle, 1/4-in. Drive
3405AS101-2	Socket, Special 7/16 x 1/4-in. Drive

a. Perform PHSRU Organizational Level Maintenance in accordance with WP 024 02 for the following tasks:

(1) Removal of battery.

(2) Installation of battery.

(a) Conduct the following:

1) Battery voltage check.

2) Battery polarity check.

3) Battery installation.

4) Final check.

(3) Removal of sensor plug.

(4) Installation of sensor plug.

(a) Conduct the following:

1) Sensor plug resistance check.

2) Final check.

INTERMEDIATE AND DEPOT MAINTENANCE

PACKING PROCEDURES

NES-25A PERSONNEL PARACHUTE ASSEMBLY

PART NO. 926AS104-6

List of Effective Work Package Pages

Reference Material

Alphabetical Index

Alphabetical Index (Cont.)

Record of Applicable Technical Directives

None

1. GENERAL.

a. Packing instructions are provided with the assumption that they will be carried out under ideal conditions in a parachute loft (WP 003 00). When a parachute assembly must be packed under unfavorable conditions, provisions must be made to protect it from possible damage and excessive humidity.

b. In no case shall the packing of a parachute assembly be interrupted after the packing operation has been started. If the packing operation is interrupted due to unforeseen circumstances, parachute assembly shall be completely repacked per instructions contained in this Work Package (WP).

c. Quality Assurance (QA) points have been included in the packing procedures. When a procedural step is followed by "(QA)" there is a quality assurance requirement. Witnessing of QA steps may be delayed QA if their satisfactory completion is verified in later steps.

d. During packing procedures, packer shall be positioned on left side of packing table and helper on right side when viewed from riser end of table.

2. PRELIMINARY PROCEDURES.

Support Equipment Required

Part Number	Nomenclature
711-07076	Altitude Chamber
—	C-Clamp (2)
Refer to WP 005 00	Fid (2)
Refer to WP 005 00	Guide Tube
TMA2	Hex Head Driver 1/16-in. Bit
Refer to WP 005 00	Line Stowage Aid
Refer to WP 005 00	Long Bar (2)
FLUKE 77	Multimeter
Refer to WP 005 00	Packing Hook
Refer to WP 005 00	Pilot Parachute, Pin Plate
Refer to WP 005 00	Ripcord Pin Lock
MS17985C310	Safety Pin
DPP-50	Scale, Spring
—	Screwdriver, Torque
Refer to WP 005 00	Shot Bag (6)
11-1-3512	Small Line Separator
Refer to WP 005 00	Temporary Locking Pin (4)
ST86-0064-1	Test Fixture
TQS6	Driver, Torque, in-lbs.
GGG-W-00686	Wrench, Torque

Materials Required

Specification or Part Number	Nomenclature
O-E-760	Alcohol, Denatured
MIL-S-45180	Compound Sealing Type II
PIA-C-5040	Cord, Nylon, Type IA or III, 16 ft.
TT-I-1795	Ink, Marking Black
701AS100-1	Tape, Nylon Type II, 18-in.
V-T-295	Thread, Nylon, Size A, Type I or II, Class A
V-T-295	Thread, Nylon, Size E, Type I or II, Class A
V-T-295	Thread, Nylon, Size FF, Type I or II, Class A
V-T-295	Thread, Nylon Size 6, Type I or II, Class A

Specification or Part Number	Nomenclature
711-07077	Test Slug (3)
F-900 Torque Seal (Color Optional)	Sealing Compound

a. Ensure that all support equipment and materials required are available prior to starting.

b. Inspect packing tools for nicks, burrs, or sharp edges which may cause damage to the parachute assembly.

c. Count and record number of packing tools.

d. Clean packing table.

3. SPREADING GUN SAFETY PIN.

a. Ease of operation.

b. Presence of two locking balls.

c. Condition of flag and flag stowage strap.

4. LAYOUT OF RIGGED PARACHUTE ASSEMBLY.

WARNING

Use extreme caution. This parachute assembly incorporates a spreading gun.

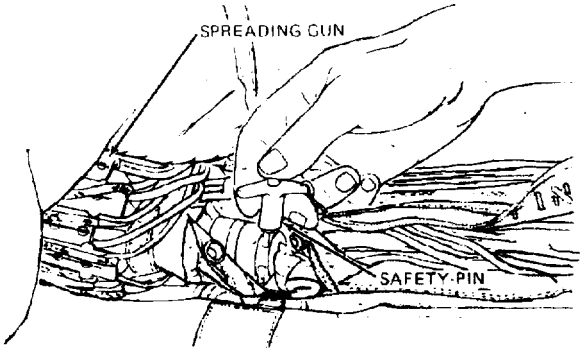
a. Check proper operation of spreading gun safety pin by depressing button and ensuring ball bearings on top of pin depress only while button is engaged. Check condition of flag and flag stowage strap.

WARNING

Do not remove spreading gun or suspension lines from container.

b. Completely open parachute container and detach spring opening assemblies.

c. Carefully raise folded canopy exposing spreading gun. Open fasteners on extractor sleeve and fully insert safety pin into spreading gun. The safety pin button must be depressed to insert pin (Figure 1). (QA)



6.2-5520

Figure 1. Safety Pin Installation

WARNING

Do not remove spreading gun safety pin at any time during this procedure.

d. Open extractor sleeve fasteners on each side of spreading gun safety pin.

e. Release fastener securing stowage sleeve to extractor sleeve.

f. Remove stowage sleeve from extractor sleeve.

g. Remove only folded canopy from container.

h. Cut tackings from suspension line cover flap and rotate flap from container.

i. Remove yoke and plate assembly from connector link on helper's side and then remove spreading gun firing lanyard.

j. Reinstall yoke and plate assembly on connector link.

k. Remove safety tie to firing lanyard thong and then remove thong from nylon tape secured to grommet on line stowage sleeve attachment loop.

l. Remove tacking from firing lanyard to stowage sleeve. Remove firing lanyard from suspension line stowage sleeve.

m. Cut tacking from stowage sleeve tab and remove suspension lines from stowage sleeve.

n. Remove connector link ties from connector links and container assembly.

o. Remove release lanyard from bottom left connector link.

p. Remove risers from container strap assembly fasteners.

5. REMOVAL OF SPREADING GUN CARTRIDGE.

WARNING

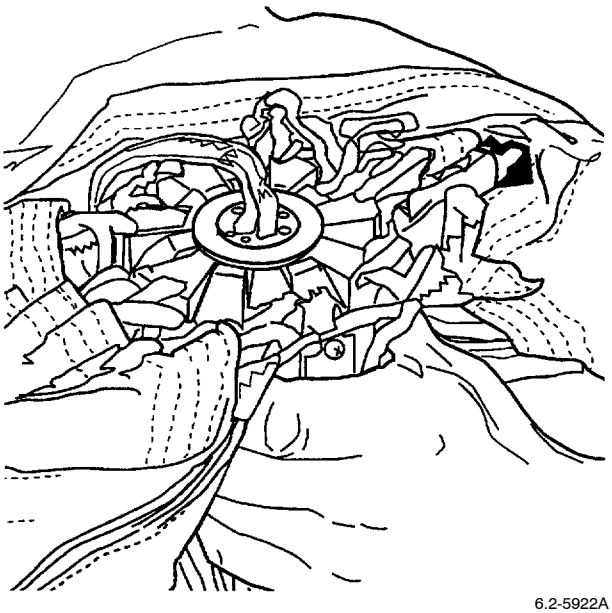
Safety pin must be installed in spreading gun.

NOTE

Use only special tools furnished for cartridge removal or replacement. It is recommended that a helper assist person performing cartridge replacement by verifying procedures as each step is accomplished. Cartridge removal firing pin pull force check shall be made each time the parachute assembly is packed.

a. Ensure safety pin is installed in spreading gun. (QA)

b. Helper will place spreading gun on packing table, with cartridge opening in upright position and hold (Figure 2).



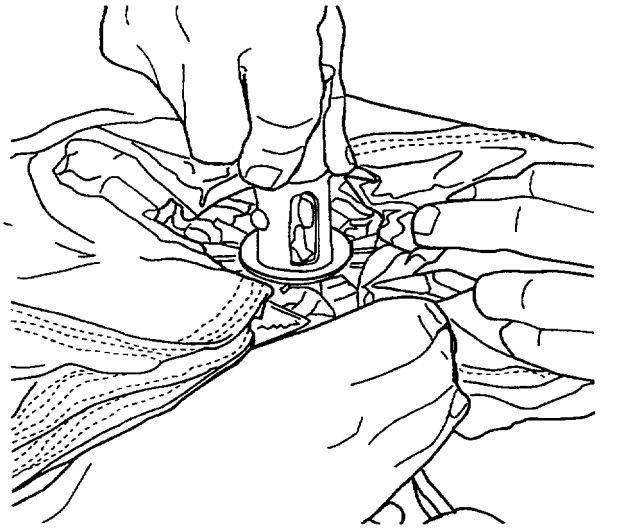
6.2-5922A

Figure 2. Positioning of Spreading Gun

CAUTION

Cartridge extractor wrench surface must mate with cartridge. Resurface wrench if required.

c. Place pins of cartridge extractor wrench into holes in cartridge (Figure 3).



6.2-5923A

Figure 3. Removal of Spreading Gun Cartridge

WARNING

The spreading gun employs an explosive cartridge. Failure to observe procedures in this Paragraph could result in serious injury.

WARNING

If difficulty occurs in removal of cartridge using extractor wrench furnished with test fixture, request aid of explosive ordnance disposal (EOD)

d. Manually unscrew and remove cartridge from chamber.

e. Remove cartridge from retainer cord by removing pin. Retain pin for reinstallation.

f. Store/dispose of cartridge per NAVAIR 11-100-1.1.

g. Attach a 16-ft. length of messenger cord to loop end of anti-squid retainer cord.

6. SPREADING GUN PULL FORCE CHECK.

a. Clamp spreading gun test fixture (WP 005 00) to packing table. Use one C-clamp positioned as closely as possible to clamp assembly.

b. Examine spreading gun chamber to ensure that no pistons are protruding into chamber and that no foreign matter is present.

c. Remove safety pin from spreading gun.

d. Slide spreading gun onto test fixture so that shaft butts against bottom of cartridge chamber (Figure 4).

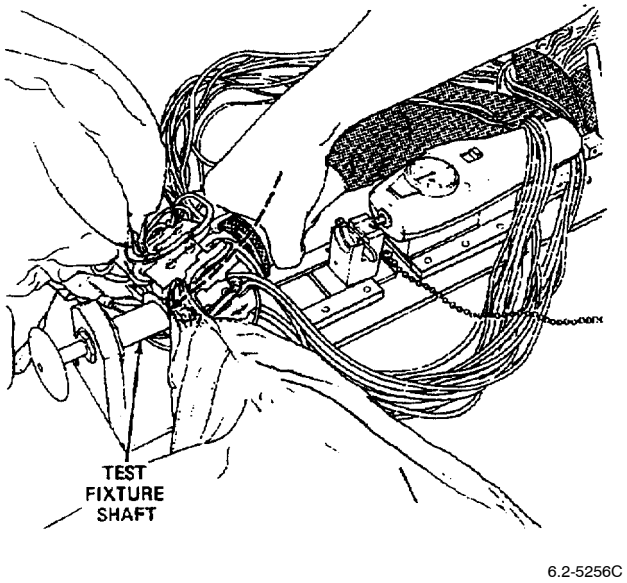


Figure 4. Installation of Spreading Gun

e. Open spreading gun extractor sleeve and expose firing pin housing.

f. Slide block assembly at center of test fixture under firing pin housing until block assembly pin slides into base plate hole. Align firing pin subassembly so that eye is horizontal and firing lanyard is located on top (Figure 5).

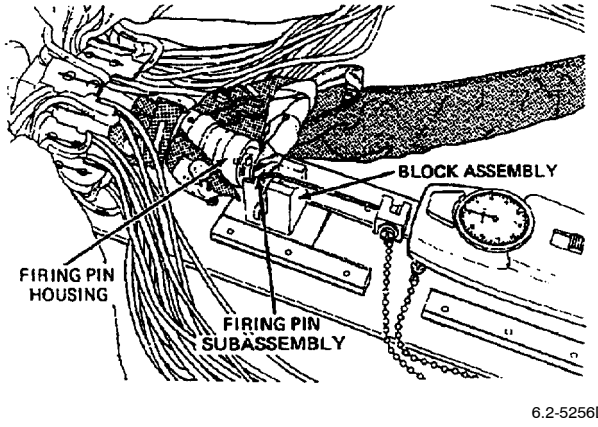


Figure 5. Alignment of Spreading Gun in Text Fixture

g. Attach hook assembly to firing pin eye and slide hook assembly block over nut attached to spring scale.

h. Move switch on spring scale to center position. Zero scale by rotating bezel. Move switch to full down position away from meter to observe pull force.

CAUTION

Do not withdraw firing pin subassembly further than the distance needed for release of firing pin. Complete removal of firing pin is not required for this test. Complete removal will cause ball bearings to unseat, thus requiring depot overhaul.

i. Pull test fixture lever until firing pin subassembly releases. Verify pull force is between 32 ± 6 lbs. If spreading gun fails first test, it shall be retested twice more. Spreading gun must pass both retests. (QA)

NOTE

If spreading gun fails pull force check, remove gun from service per WP 004 00.

j. After pull force measurement has been obtained, remove hook assembly from firing pin subassembly.

k. Push firing pin subassembly back into housing. Push control disc firmly inward, forcing firing pin subassembly out of housing. Apply inward hand pressure to firing pin subassembly as it moves out. Continue to move control disc inward, applying hand pressure to firing pin subassembly until it clicks into place. When click is heard, gun is cocked. Gently release control disc while still exerting pressure on firing pin subassembly.

l. Tug gently on firing pin subassembly until effect of spring loading is felt. If firing pin subassembly moves without spring tension, the gun is not cocked and step k must be repeated. (QA)

m. Release block assembly by pulling pin out of hole in baseplate and sliding away from spreading gun.

WARNING

Safety pin must be installed.

n. Install safety pin in spreading gun.

o. Remove spreading gun from test fixture. Do not remove gun by pulling on firing lanyard.

p. Remove test fixture from packing table.

7. LAYOUT OF PARACHUTE ASSEMBLY.

a. Stretch canopy and suspension lines full length on packing table. Rotate spreading gun so that suspension lines 1 and 28 are facing up and lines 14 and 15 are on bottom.

b. Attach tension strap hook to canopy apex lines.

c. At spreading gun, separate suspension lines into two equal groups with lines 1 thru 14 on packer's side and lines 15 thru 28 on helper's side. Grasping each group of lines, walk from skirt hem to connector links removing any dips and twists between the two groups (Figure 6).

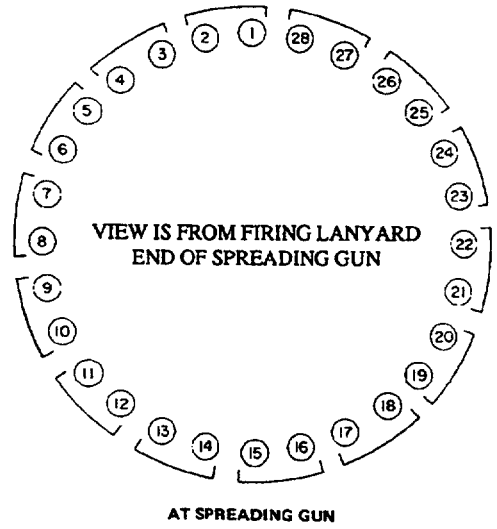


Figure 6. Arrangement and Oreintation of Suspension Lines

d. Place connector link holding suspension lines 1 thru 7 on top of connector link holding suspension lines 8 thru 14. Place connector link holding suspension lines 15 thru 21 on top of lines 22 thru 28. Insert tension hooks into connector links and into packing table.

e. Apply slight tension to canopy until suspension lines are taut.

f. Pull vent collar down toward canopy. Align exposed vent hem.

g. Pull vent collar back to original position.

8. REMOVAL/DISARMING/DISASSEMBLY OF AUTOMATIC PARACHUTE RIPCORD RELEASE.

WARNING

Do not pull arming cable from armed release assembly, as this will cause it to fire.

a. Open release assembly pocket in the parachute container, and remove release assembly a sufficient distance to allow disassembly.

b. Remove cover locking screw and washer (Figure 7).

NOTE

Cover and power cable assembly and receiver and barrel assembly are serialized, matched sets. Do not mix assemblies.

c. Slide cover off receiver and barrel assembly.

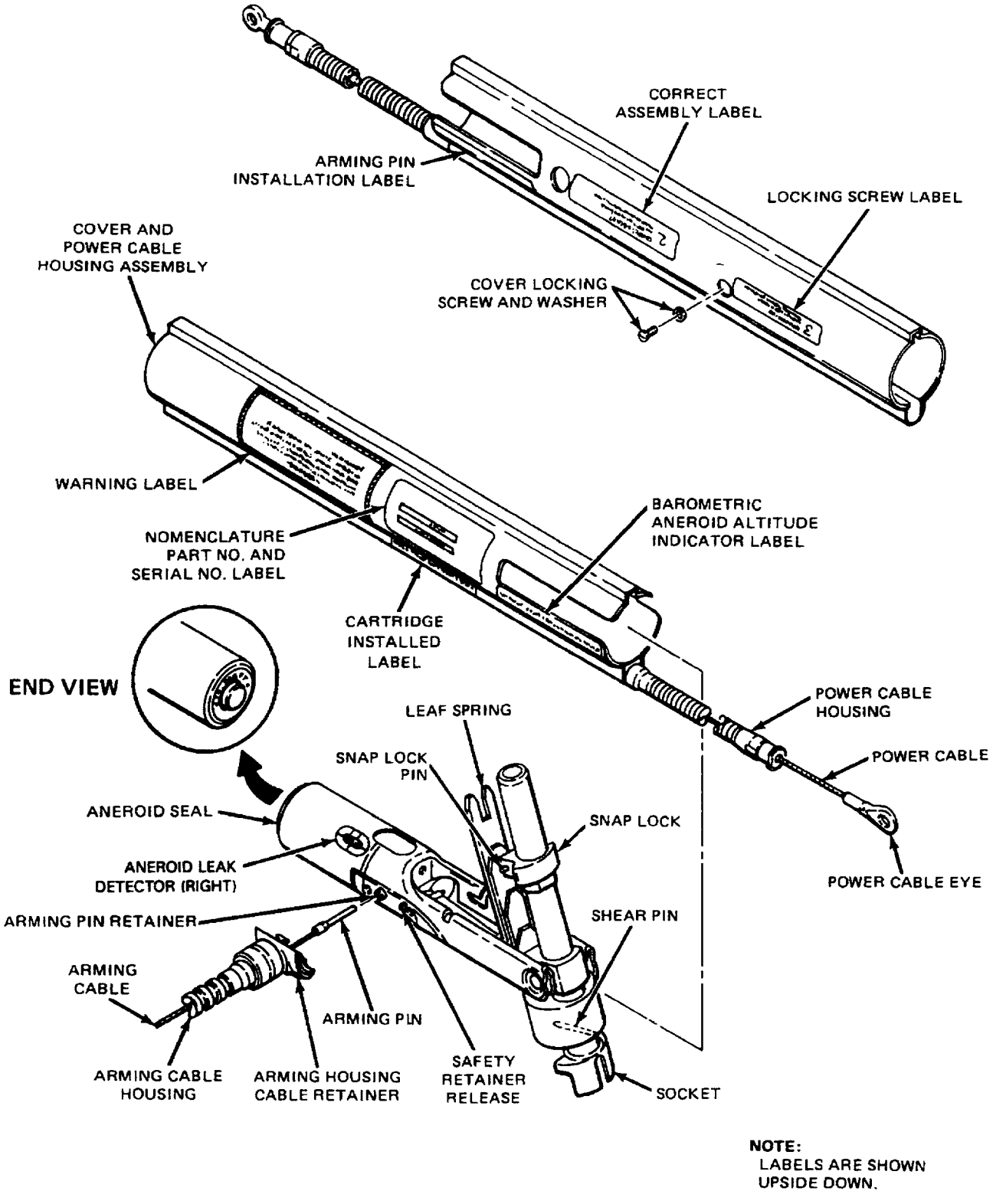


Figure 7. Automatic Parachute Ripcord Release, Model 7000

d. Disengage barrel by pushing down on snap-lock; slide back and release (Figure 8).

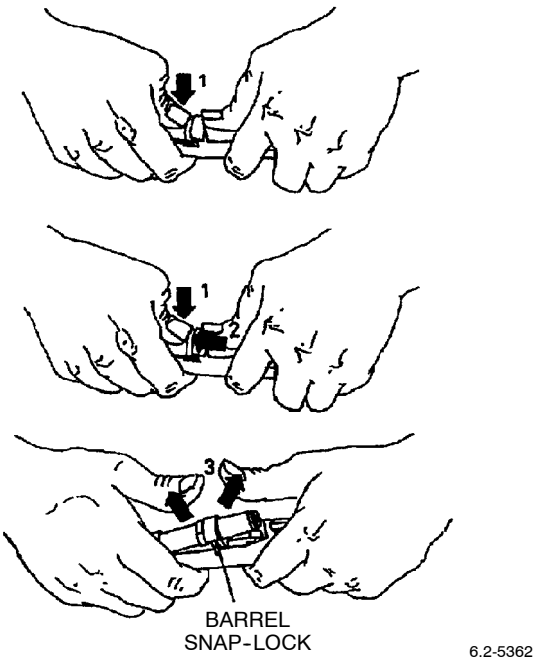


Figure 8. Disarming Ripcord Release

e. Remove cartridge from barrel immediately after barrel is disengaged. Store cartridge per NAVAIR 11-100-1.1. (QA)

f. Remove arming cable housing from receiver and barrel by depressing retainer release (Figure 7). Remove arming cable housing from receiver, leaving arming cable pin installed.

g. Ensure that arming cable pin is positively retained by arming pin retainer (Figure 7).

h. Remove arming cable pin from receiver by grasping arming pin and pulling.

i. Remove arming cable and clip from arming cable housing.

9. INSPECTION (SPECIAL).

a. Maximum scheduled repack cycle is 448 days.

10. SERVICE LIFE CHECK AND CONFIGURATION UPDATING.

NOTE

Unless otherwise noted, parachute component life shall start on the month of the date of manufacture and expire on the last day of that month.

a. All internal service life components, including cartridges, shall be replaced if service life expires prior to the next repack cycle. Repack cycles may be shortened to correspond to the first component that is expiring prior to the next inspection cycle. An external overage component (i.e. Parachute Harness Sensing Release Unit Cartridge) can be replaced without a parachute repack.

NOTE

Upon initiation of any Quality Deficiency Report (QDR), contact the In-Service Support Team at NAWCWD, China Lake, CA.

b. When replacing an external overage component without a parachute repack, draw a single red line through any information pertaining to that component on the Parachute Record (OPNAV 4790/101). The replacement component will be annotated on the next available line. The QA who witnessed the task shall apply the QA stamp to the right of the entry and complete the VIDS/MAF (OPNAV 4790/60).

c. A parachute assembly may be opened to permit compliance with a Technical Directive. After completion of directive, the parachute assembly repack cycle may be re-based if all parachute components have the necessary life available or may be returned with the original repack date in order to keep it aligned with the actual aircraft inspection cycle.

d. When a component reaches the service/total life limit, it shall be returned to supply for disposition.

e. If parts received from supply are lacking a date of manufacture and are new in manufacturer's packaging, they may be used for one complete repack cycle, then removed. Place "No Date of Manufacture" in the Date of Manufacture's block on the Parachute Record (OPNAV 4790/101). Submission of a Quality Deficiency Report (QDR) shall follow each occurrence.

f. Components without a service/total life shall be removed from service if the components do not pass inspection, as determined by Quality Assurance Representative (QAR) or Collateral Duty Inspector (CDI).

g. Spreading gun retainer cord is changed with the spreading gun.

h. Check date placed in-service and date of manufacture on each parachute part for service/total life as follows:

Nomenclature	Service Life (Yr)	Total Life (Yr)
Battery	4	4
Canopy Assembly	None	15
Cartridge, Impulse MF-78	Refer to NAVAIR 11-100-1.1	
Cartridge MF-37	Refer to NAVAIR 11-100-1.1	
Cartridge MW19	Refer to NAVAIR 11-100-1.1	
Cross-Connector Strap	(See Note 1)	(See Note 1)
Electronics Package Assembly	None	8
Pilot Parachute	None	15
Pilot Parachute Connector Strap		15
Riser Assembly	None	15
Spreading Gun	None	11 1/2

Note 1: Replace at Canopy Assembly replacement.

(1) Markings for completeness, legibility, and agreement with information on Parachute Record (OPNAV 4790/101).

(2) Compare configuration of parachute assembly to that shown in WP 020 04 Illustrated Parts Breakdown.

11. AUTOMATIC PARACHUTE RIPCORD RELEASE.

NOTE

Do not mismatch cover and power cable housing assembly and barrel and receiver assembly.

a. Serial numbers on the cover and power cable housing and receiver and barrel assembly for matched numbers. (QA)

b. Receiver and barrel assembly for nicks, cracks, gouges, distortion, corrosion, or other damage which could cause malfunction in-service.

c. Decals and labels for legibility and security of attachment.

d. Cover and power cable housing for nicks, gouges, distortion, corrosion, and security of power cable housing.

e. Power cable for freedom of movement and secure attachment of swaged ball and power cable eye (Figure 9).

f. Arming cable for kinks, broken strands, corrosion, and security of arming pin and sqaged ball.

g. End fitting for distortion, corrosion, cracks, breaks, and security of attachment.

h. Arming cable clip retainer and retainer pin for distortion, corrosion, and other damage.

i. Arming cable housing for bends, retention of end furrel, retention of housing retainer.

j. Aneroid for evidence of expansion and correct indication.

k. Ensure proper retention of arming pin retainer by inserting arming pin in retainer while barrel is unlocked. Press pin into place firmly until locked into pin groove. Pin should now be held securely.

l. Manually pull arming cable pin from retainer, ensuring that pin was properly secured. (QA)

m. Sealing compound on aneroid; seal must be intact. Cracks due to normal aging of seal material are acceptable (Figure 10).

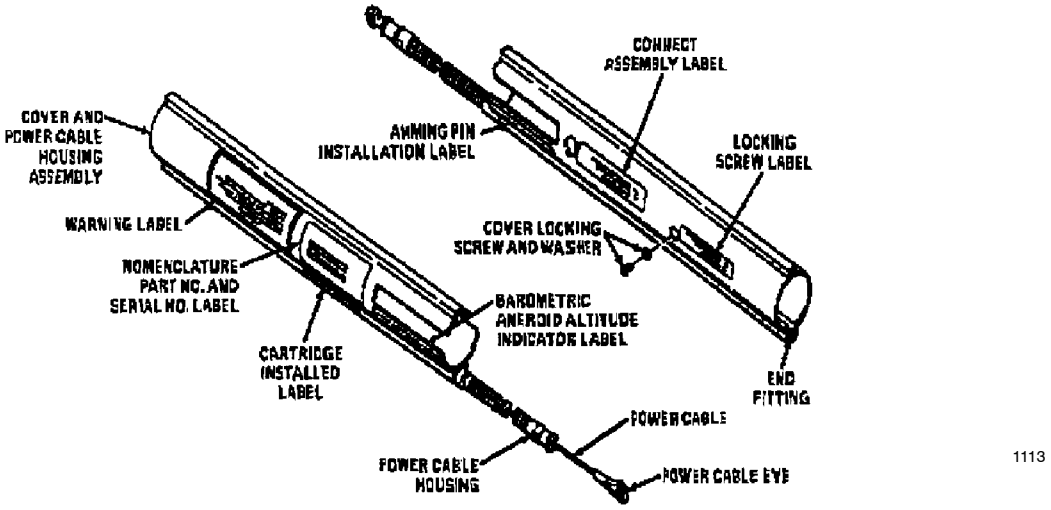


Figure 9. Attachment of Swaged Ball and Power Cable Eye

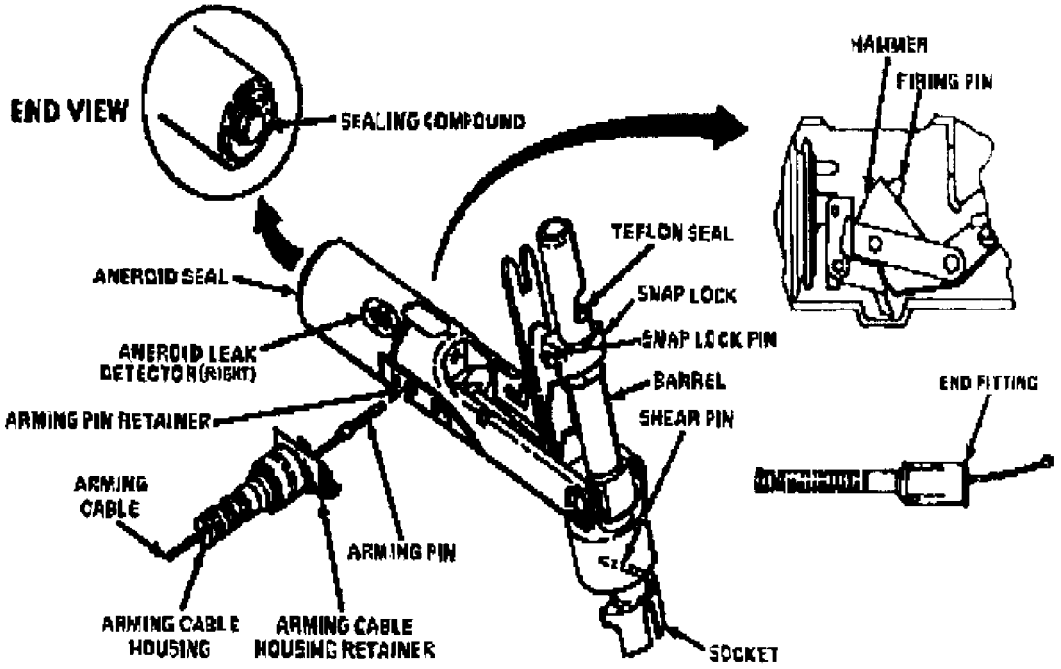


Figure 10. Sealing Compound Check

WARNING

Do not twist socket, as this will break shear pin.

n. Socket for visible damage and retention of socket and piston by shear pin.

o. Snap-lock pin for security and damage.

p. Teflon seal (inside of barrel) for placement.

q. Firing pin for flattening, gouges, and other damage.

r. Leaf springs on receiver and barrel assembly for damage; leaf spring retaining screw for condition and presence of torque seal (Figure 11).

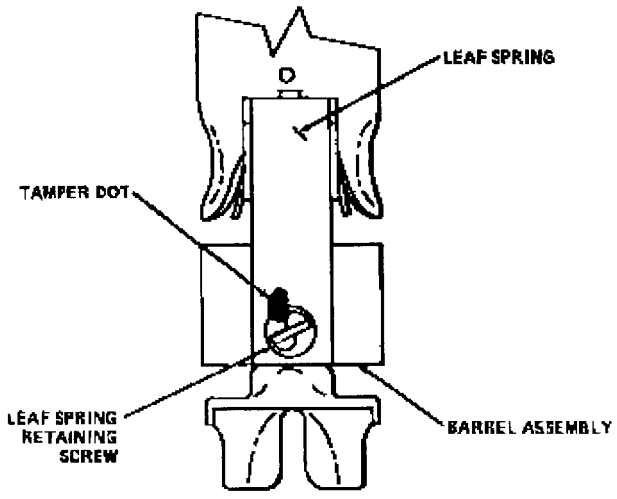


Figure 11. Presence of Torque Seal

12. RIPCORD RELEASE FIRING ALTITUDE CHECK.

a. Install test chamber substitute arming pin in ripcord release.

CAUTION

Do not release firing mechanism without test slug installed, as this will distort the firewall.

b. Install test slug.

CAUTION

At no time will a tool or other device be used to open or close the ripcord release.

c. Press barrel down into position in receiver, ensure snap-lock pins lock barrel in position.

d. Perform firing altitude check:

NOTE

Determine whether actuator being tested is pre-set for 10,000 ft. or 14,000 ft. The ripcord release firing check must simulate firing ±1,000 ft. of pre-set altitude.

(1) Install barrel and receiver in test chamber. (QA)

(2) Set altimeter to 29.92 in. Hg. (QA)

(3) Evacuate chamber to a minimum of 25, 000 ft. pressure altitude. (QA)

(4) Decrease altitude at a rate of 175 to 200 ft./sec. (QA)

(5) Actuate arm toggle to withdraw arming pin at approximately 20,000 ft. pressure altitude. (QA)

(6) Verify altitude at which ripcord release firing pin strikes test slug. (QA)

(7) Remove test slug from barrel; check primer for indent; indent must be present and centered. (QA)

CAUTION

Test slug must be removed from barrel after each use.

(8) Repeat firing altitude check two additional times; using a new test slug each time; the ripcord release must pass all three firing altitude checks. (QA)

(9) Discard test slugs. (QA)

(10) Remove ripcord release from altitude chamber. (QA)

13. RIPCORD RELEASE END FITTING REMOVAL TEST.

NOTE

The arming cable and housing shall be removed from the automatic parachute ripcord release assembly.

a. Helper shall hold arming cable housing steady on packing table.

b. Attach gage to the swaged ball using Type I or IA nylon cord.

c. Using a straight steady pull, observe amount of pull required to remove end fitting from arming cable housing. Allowable force is 17 lbs. ± 3 lbs. (QA)

14. SPREADING GUN.

WARNING

Safety pin must be installed. Do not twist or pull on firing lanyard.

a. Extractor sleeve for contamination, fraying, loose or broken stitching, security and condition of fasteners, and security of attachment.

b. Decals and labels for presence and legibility.

c. Firing lanyard and stowage sleeve for contamination, twists, cuts, burns, fraying, security of attachment and condition of fasteners.

d. Spreading gun for corrosion, slugs properly held by shear band assembly, security of plates, condition of unbroken lock seal, and plate screws for presence and condition of torque seal.

e. Firing pin housing for security. Grasp around housing slug/plates with left hand. With right hand grasp safety pin and top of firing mechanism. In counterclockwise direction try to rotate firing mechanism. Any rotation of the firing mechanism is cause for rejection.

f. Inspect the anti-squid retaining cord for proper attachment to the apex lines and the cartridge. Verify presence of tacking, and inspect for proper stowage of excess line in the stowage sleeve. For proper tacking of the anti-squid retainer cord, refer to WP 004 00. (QA)

g. Firing lanyard for proper stowage in stowage sleeve channels and presence of tacking (Figure 12). (QA)

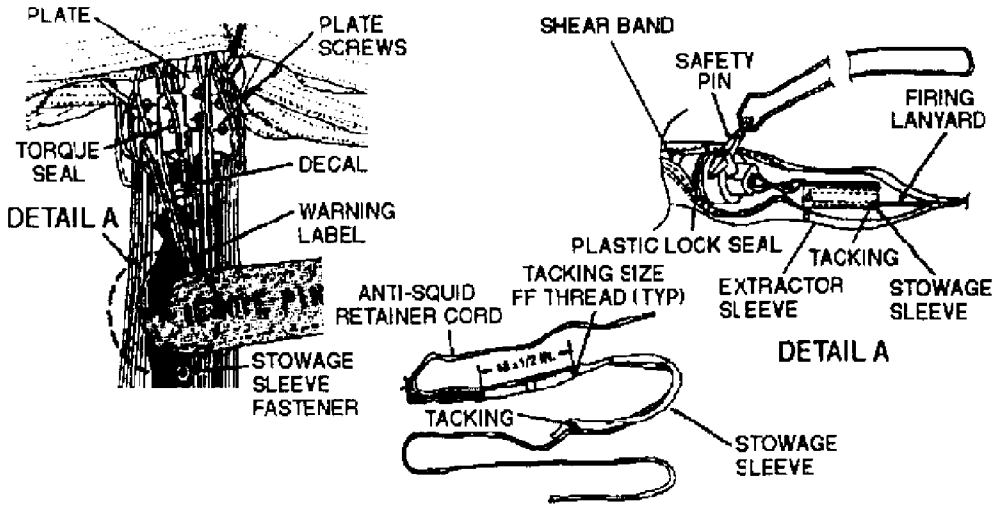


Figure 12. Firing Lanyard Stowage

15. CANOPY ASSEMBLY.

a. Canopy skirt hem, fabric surface, diagonal seams, radical seams, vent hem, water deflation pockets, for cuts, holes, ruptures, contamination, deterioration, and loose or broken stitching.

b. Suspension lines and canopy apex lines for fraying, ruptures, protruding inner core lines, burns, contamination, and presence of twists.

c. Lines and spreading gun anchor loops for security of attachment to skirt hem.

d. Attachment of four-line release anchor loops to suspension lines 3 and 26.

e. Attachment of four-line release lanyards to anchor loops on suspension lines 3 and 26.

f. Connector links for corrosion, distortion, nicks, burrs, sharp edges, and cracks.

NOTE

For Double "L" Connector Link, refer to WP 020 03 for disassembly, assembly, and inspection instructions.

g. Connector links for defective yoke and plate assemblies. Maximum of 1/32-in. play allowable in plate.

h. Torque seal unbroken with yoke and plate assemblies installed with knurled portion facing up and screwheads facing outboard (Figure 13). (QA)

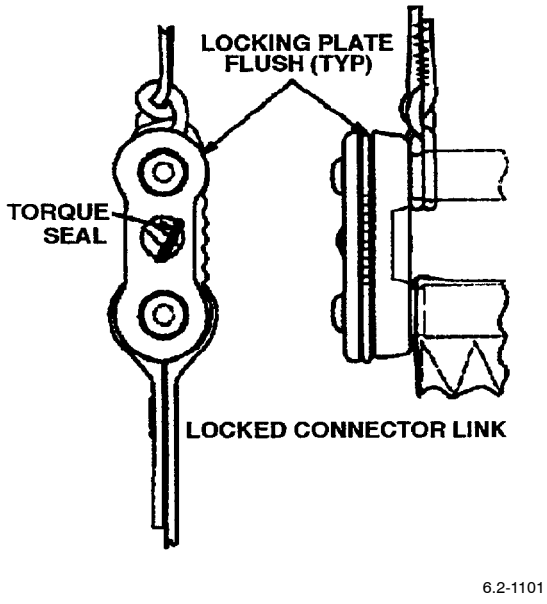


Figure 13. Torque Seal Unbroken

16. PILOT PARACHUTE AND BRIDLE ASSEMBLY.

a. Pilot parachute:

(1) Fabric surfaces and seams for cuts, tears, fraying, and loose or broken stitching.

(2) Seam area at crown for seam separation.

(3) Spring assembly for distortion.

(4) Loose or broken tackings (4 places each) at bottom and top of the coil spring.

(5) Locking cone and grommet for condition, and security of attachment.

(6) Risers for security of attachment.

b. Internal bridle assembly:

(1) Cuts, fraying, and loose or broken stitching.

(2) Proper attachment to vent lines and pilot parachute Lark's head knot.

(3) Loose or broken tacking of lark's head knot at pilot parachute loop.

17. RISERS AND CROSS-CONNECTOR STRAPS.

a. Webbing for contamination, rust at points of contact with metal parts, cuts, twists, fading, wear, burns, fraying, abrasions, and loose or broken stitching.

b. Four-line release lanyard flute and ripcord housing flute for wear and security of attachment.

c. Four-line release lanyard pull loops for loose or broken tackings.

d. Ripcord grip retainer for corrosion, damage, and security of attachment.

e. Shoulder harness fittings for corrosion, damage, and security of attachment.

f. Ripcord grip retainer cover for condition and security of attachment.

g. Cross-connector straps for contamination, cuts, fraying, and loose or broken stitching.

h. Cross-connector straps for proper attachment to connector links.

18. RIPCORD ASSEMBLY.

a. Cable for corrosion, bends, broken strands and security of swaged terminal ball.

b. Locking pins for bends, dents, cracks, corrosion, and security of attachment to cable.

c. Ripcord grip for dents, cracks, and corrosion.

d. Housing and clip for corrosion, bends, dents, loose ferrules, breaks, and cracks.

19. CONTAINER AND SUSPENSION LINE STOWAGE SLEEVE.

a. Grommets, cones, snap fasteners for security of attachment, cracks, corrosion, nicks, and gouges.

b. Slide fasteners for condition and proper operation.

c. Fabric areas for seam separations, loose or broken stitching, cuts, tears, contamination, and deterioration.

d. Presence and condition of warning labels.

e. Hardware for corrosion, bends, dents, nicks, sharp edges, and security of attachment.

f. Spring opening assemblies for broken springs, contamination, corrosion, cuts, fraying, bent or broken hooks, elasticity, and loose or broken stitching.

g. Spring opening eyes (8) for security of attachment.

h. Releasable clamp and base plate for corrosion, damage and security of stitching.

i. Release lanyard and lanyard guide for contamination, tears, fraying, loose or broken stitching, cuts, burns, and locking pin for security of attachment.

j. Stowage sleeve for contamination, cuts, tears, deterioration and loose or broken stitching.

k. Grommets and washers for corrosion, damage, and security of attachment.

l. Stowage sleeve for security of attachment to container.

20. LAP BELT ASSEMBLY AND BACK PAD.

a. Webbing for contamination, rust, cuts, fraying, twists; loose or broken stitching and presence and condition of keeper straps.

b. Adapters for corrosion, nicks, burrs, wear, and cracks.

c. Lap belt fittings for corrosion, bends, burrs, wear, and cracks.

d. Slide fastener for condition, and security of attachment.

e. Release assemblies for condition, corrosion, security of attachment and proper operation (Figure 14).

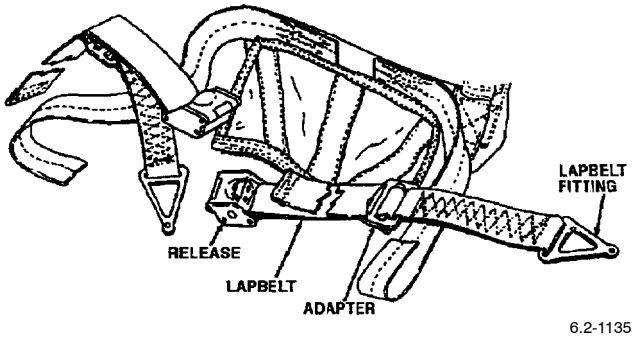


Figure 14. Release Assemblies

f. Back pad fabric area for cuts, tears, contamination, loose or broken stitching and defective snap fasteners.

g. Back pad for presence and condition of warning label.

21. SUSPENSION LINE CONTINUITY.

a. Activate the four line release and retack per WP 004 00. (QA)

b. Ensure the spreading gun with suspension lines 1 and 28 are facing up. Inspect the suspension lines for correct sequencing to the connector links and the spreading gun.

c. Lines shall pass thru corresponding numbered slots in spreading gun slugs. Ensure that loops attached to odd-numbered suspension lines pass thru slots in odd-numbered slugs. (QA)

d. Lines shall run free from skirt hem thru corresponding numbered slots in spreading gun slugs to connector links without dips or twists (Figure 15). (QA)

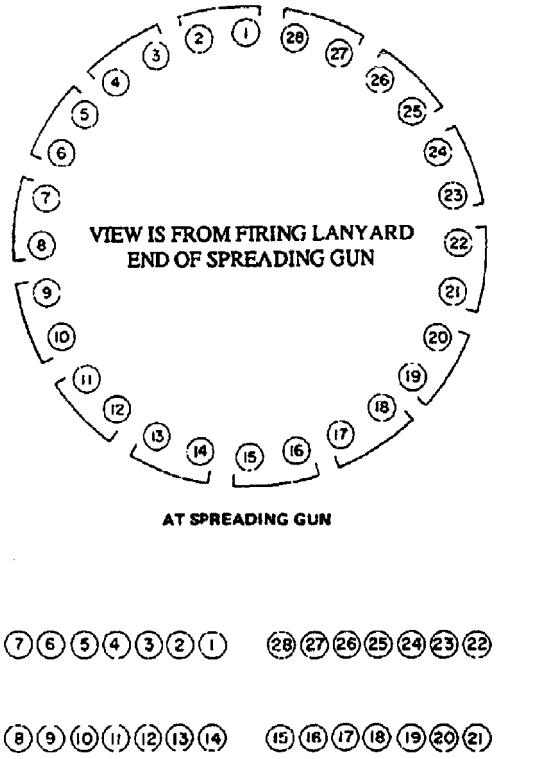


Figure 15. Suspension Line Continuity Check

22. PACKING.

23. STRAIGHTENING OF CANOPY GORES.

a. Arrange canopy on packing table with folded gores 1 thru 14 on packer's side and folded gores 28 thru 15 on helper's side. Ensure attachment loop is located on uppermost radial seam of folded canopy (Figure 16).

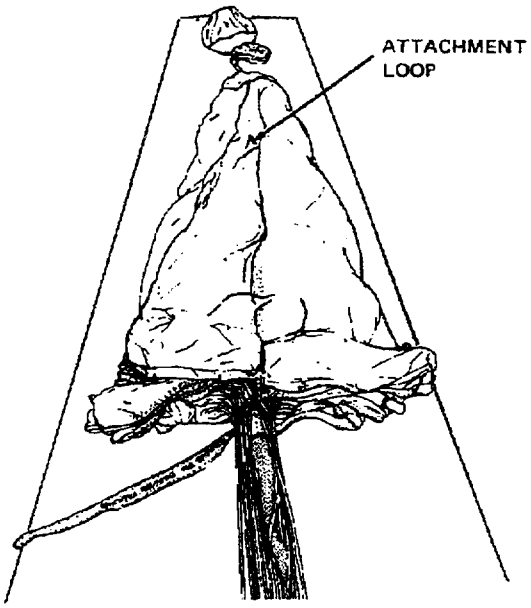


Figure 16. Arrangement of Canopy

b. Helper shall place a shot bag on helper's side of skirt hem (Figure 17).

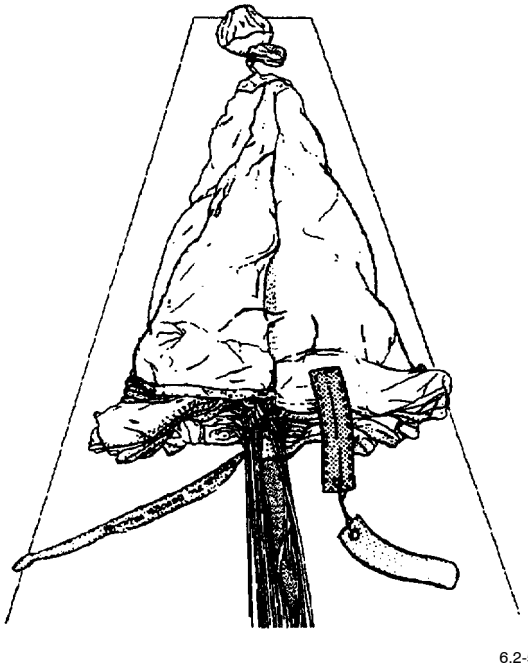


Figure 17. Placement of Shot Bag on Helper's Side

c. Packer shall rotate all gores on packer's side as a group, except bottom gore, over to helper's side of packing table. Packer shall straighten and smooth bottom gore on packer's side of table, throughout its length to apex (Figure 18).

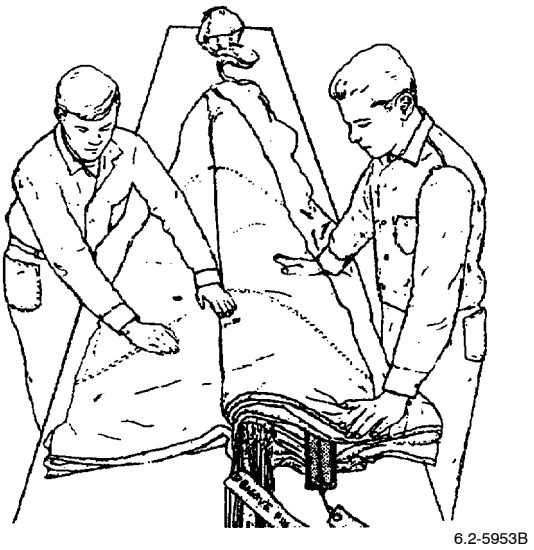


Figure 18. Packer Shall Rotate All Gores on Packer's Side

d. Packer shall return gores above shot bag on helper's side of packing table to packer's side one at a time. Each fold shall be straightened and smoothed (Figure 19).

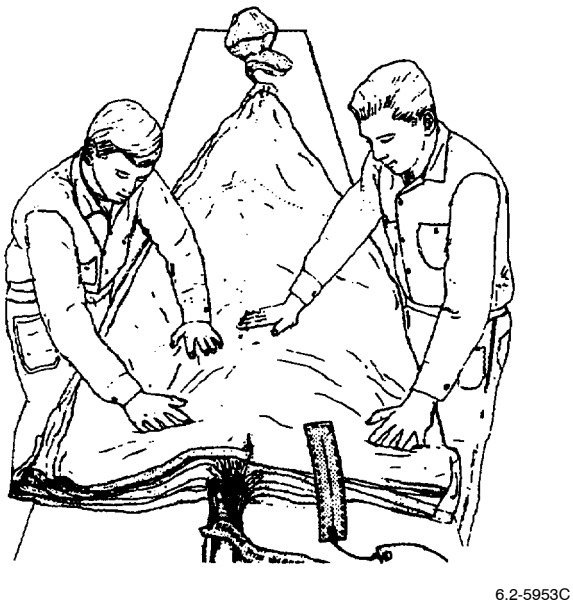
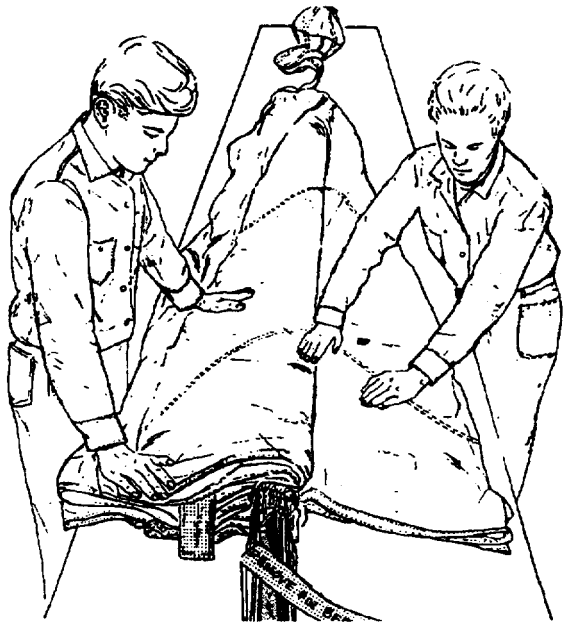


Figure 19. Packer Shall Return All Gores Above Shot Bag on Helper's Side

e. Helper shall remove shot bag from canopy and place it on skirt hem on packer's side.

f. Helper shall rotate all gores on helper's side as a group; except bottom gore over to packer's side of packing table. Helper shall straighten and smooth gore on helper's side of table, throughout its length to apex (Figure 20).

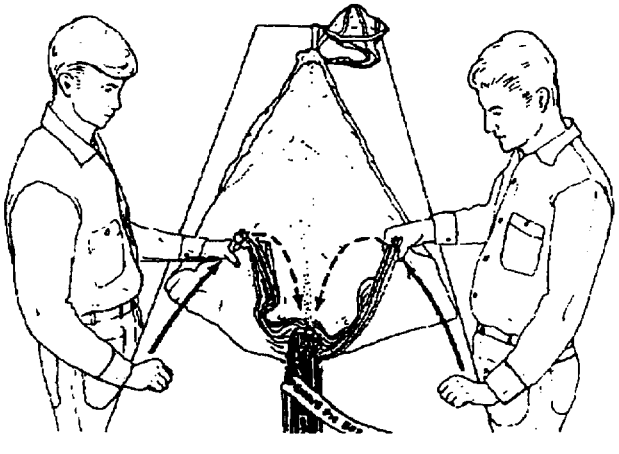


6.2-6168

Figure 20. Helper Shall Rotate All Gores on Helper's Side

g. Helper shall return gores above shot bag on packer's side of table to helper's side one at a time. Each fold shall be straightened and smoothed. Remove shot bag on packer's side.

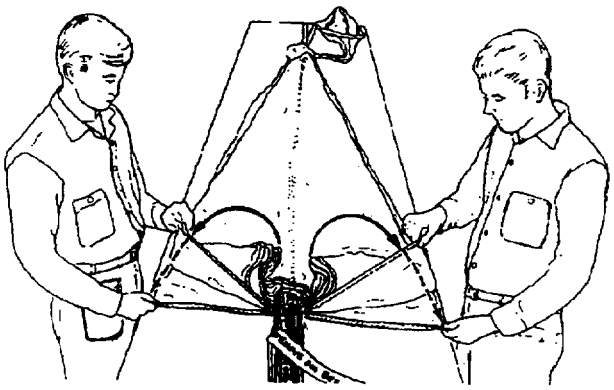
h. Packer and helper shall grasp skirt hem at mid-sections of gores and rotate toward suspension lines (Figure 21).



6.2-6168A

Figure 21. Packer and Helper Shall Grasp Skirt Hem and Rotate to Center

i. Each fold shall be aligned and counted when placed back onto table (Figure 22).



6.2-6168B

Figure 22. Each Fold Shall Be Aligned and Counted

j. Each group of folds on left and right of spreading gun shall count 14 gores.

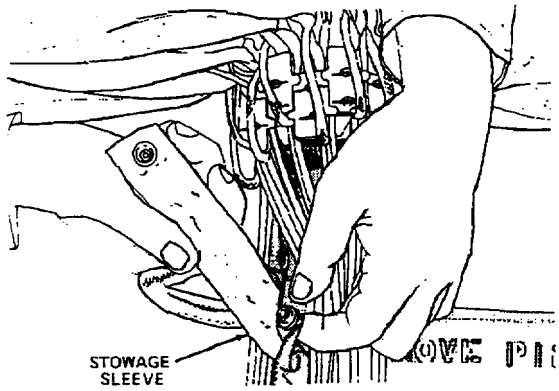
24. STOWAGE OF STOWAGE SLEEVE IN EXTRACTOR SLEEVE.

WARNING

The 1/2-in. tapes must not be twisted around firing lanyard.

a. Ensure 1/2-in. tapes are not twisted around firing lanyard.

b. Insert stowage sleeve into extractor sleeve open end first (Figure 23).



6.2-5431

Figure 23. Insert Stowage Sleeve

c. Engage fastener on stowage sleeve to fastener on extractor sleeve. (QA)

d. Engage extractor sleeve fasteners on each side of safety pin. Pull extractor sleeve straight and gently pull slack from firing lanyard (Figure 24). (QA)

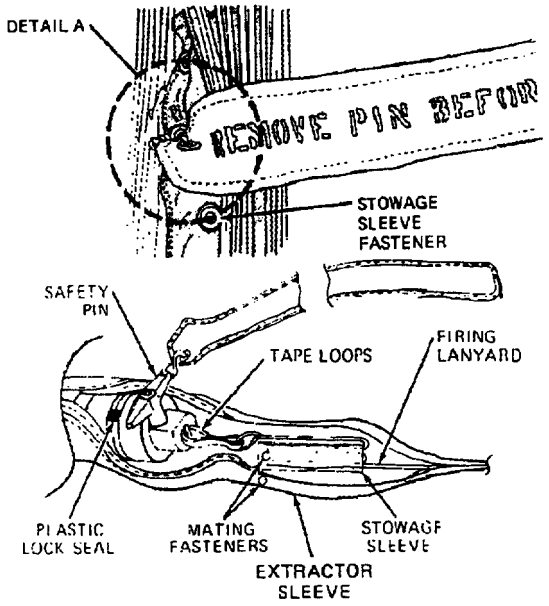


Figure 24. Engage Fastener on Stowage Sleeve

e. Remove tension from canopy and remove tension strap from vent lines.

25. INSTALLATION OF SPREADING GUN CARTRIDGE.

CAUTION

Do not allow alcohol to flow inside gun as this could damage O-rings and lubrication.

a. Clean cartridge chamber and threads with small amount of denatured alcohol. Ensure that old sealing compound and all foreign matter are removed. Gun shall be tilted to allow alcohol to run out of gun. Allow a minimum of 2 min. drying time for alcohol to evaporate.

b. Record type of cartridge, part number, delay time, lot number, and service life expiration date on Parachute Record (OPNAV 4790/101). (QA)

c. Apply sealing compound to top two threads of cartridge (Figure 25).

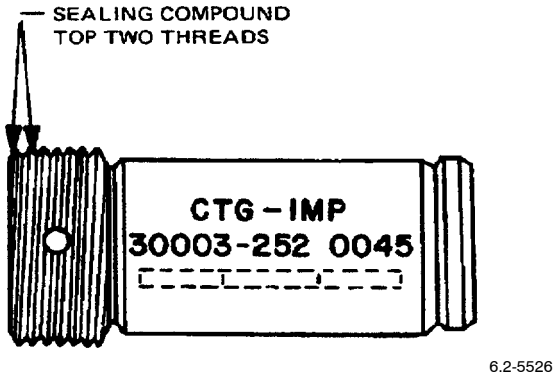


Figure 25. Spreading Gun Cartridge Installation

d. Using messenger cord, draw vent toward skirt until anti-squid retainer cord is even with spreading gun. Remove messenger cord.

e. Helper will place spreading gun on packing table, with cartridge opening in upright position and hold (Figure 2).

f. Ensure there are no knots in retaining cord. Attach new cartridge to anti-squid retainer cord by passing pin thru screw base of cartridge and loop in end of anti-squid retainer cord. (QA)

WARNING

Do not force cartridge into chamber. Safety pin must be installed.

When a cartridge is properly installed, base should be about even with top edge of chamber. If cartridge is more than one thread above edge, remove cartridge and check bottom of chamber for any obstruction, i.e., slug pistons. If cartridge is damaged replace with new cartridge.

NOTE

Use only special tools furnished for cartridge installation. It is recommended that a helper assist the person performing cartridge installation by verifying procedures as each step is accomplished.

g. Insert cartridge into chamber. Manually tighten cartridge into chamber. If cartridge stops before threads are engaged, remove cartridge and check for protruding slug pistons, and push back as necessary.

h. Place pins of cartridge extractor wrench into holes in cartridge and torque to a value of 84 ± 12 in-lbs. (QA)

26. FOLDING OF CANOPY.

a. Straighten canopy skirt hem.

b. Fold canopy on helper's side by rotating gores to center of canopy (Figure 26).

6.2-6169

Figure 26. Fold Canopy on Helper's Side

c. Fold canopy on packer's side by rotating gores to center. Folded canopy should be width of container assembly (Figure 27).

6.2-6169A

Figure 27. Fold Canopy on Packer's Side

d. Place one shot bag slightly behind skirt hem and another on middle of canopy (Figure 28).

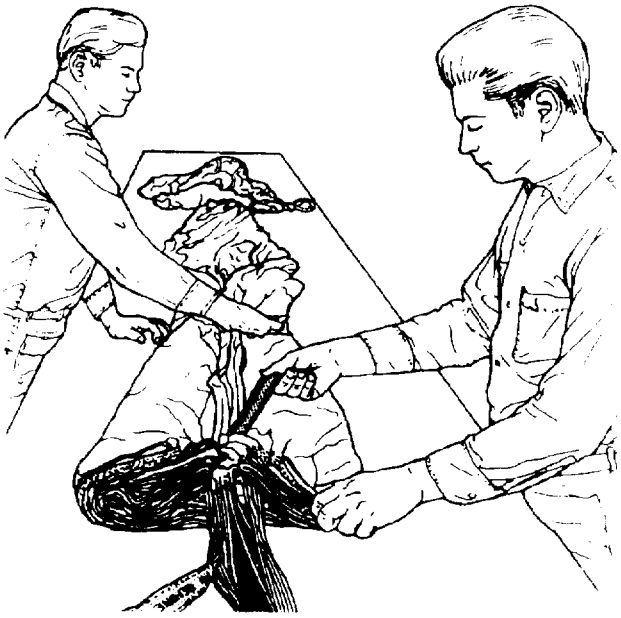


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Figure 28. Place One Shot Bag Behind Skirt Hem

27. AUTOMATIC PARACHUTE RIPCORD RELEASE ASSEMBLY AND ARMING.

NOTE

Right side of release assembly contains aneroid leak detector.

WARNING

Ripcord release with proper altitude setting, time delay cartridge, arming cable housing, and arming cable must be used.

a. Ensure ripcord release has proper altitude setting, arming cable housing, and arming cable. (QA)

b. Ensure arming cable housing is routed thru hole in right side of release pocket and buttonhole in right side of container.

c. Insert arming cable into cable housing.

d. Attach clip retainer to cable housing.

e. With receiver and barrel assembly in the open position, install arming pin release assembly by inserting and locking (arming pin is fully seated when an audible click is heard) the arming pin into the arming pin retainer, ensuring the arming cable housing exits out the left side of container (Figure 29). (QA)

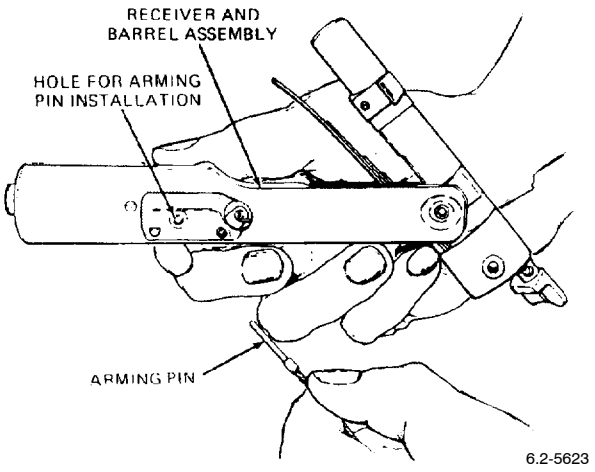


Figure 29. Installation of Arming Pin

WARNING

To ensure proper penetration of cartridge primer, firing pin/hammer assembly must be completely retracted. If edge where curved surface meets flat surface of the hammer assembly is not aligned directly above the arming pin, the release assembly is not properly armed.

f. Ensure that firing pin/hammer assembly is completely retracted. The firing pin/hammer is completely retracted if top edge of hammer is aligned above arming pin (Figure 30). (QA)

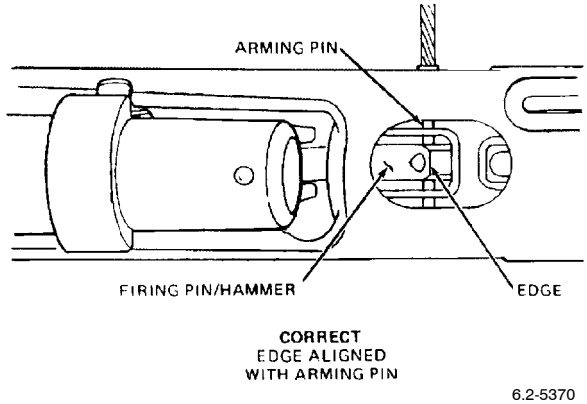


Figure 30. Verification of Firing Pin/ Hammer Retraction

g. Connect arming cable housing retainer to receiver and barrel assembly. Ensure that safety retainer secures housing to receiver (Figure 31).

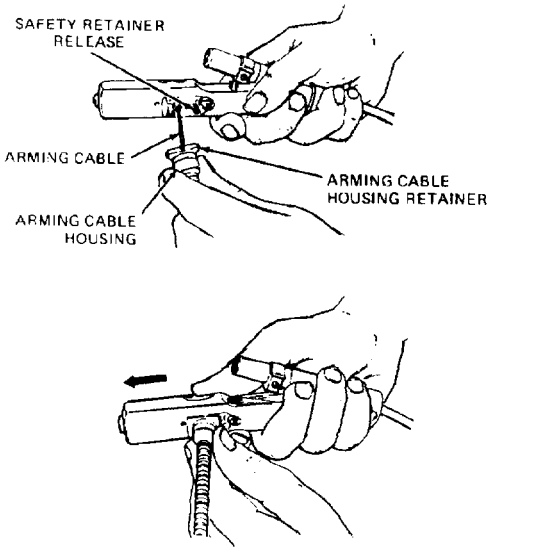


Figure 31. Attachment of Arming Cable Housing

WARNING

Complete arming and installation are mandatory from this point as a safety measure.

h. Enter cartridge time delay, part number, type, expiration date, and load lot number on Parachute Record (OPNAV 4790/101). (QA)

WARNING

Before installing delay cartridge in the automatic parachute release, be sure that arming pin has been inserted thru both the hammer and lock.

i. Insert correct cartridge per WP 020 04 in barrel. (QA)

WARNING

If arming pin is improperly installed, cartridge will fire while locking barrel.

j. While pressing barrel down, look thru inspection hole in receiver and ensure that hammer assembly does not swing toward firewall. If hammer swings, arming pin is improperly installed. Do not attempt to assemble release assembly further, as this could discharge the cartridge. Disassemble improperly armed release assembly and rearm.

k. Press barrel down into position in receiver. As barrel reaches proper position, exert forward pressure on snap-lock, causing snap-lock pins to lock barrel in position. Ensure that snap-lock is aligned with alignment arrow (Figure 32).

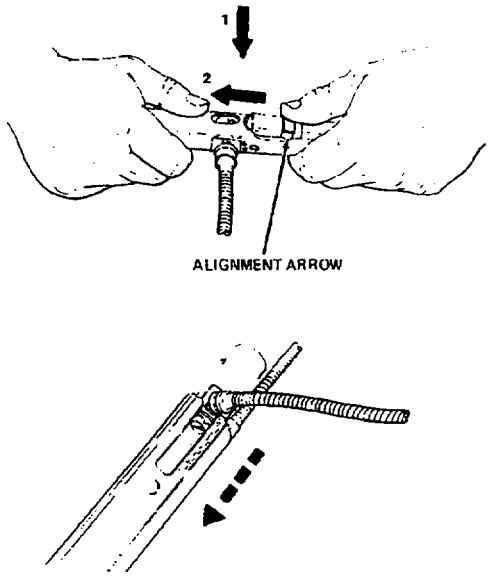


Figure 32. Locking Barrel and Installation of Cover

l. Position cover and power cable housing assembly with power cable facing container.

m. Position receiver and barrel assembly so locking screw hole aligns with locking screw hole in cover and power cable housing assembly (Figure 32).

n. Slide receiver and barrel assembly into cover and power cable assembly until holes for screws are aligned.

o. Install cover locking screw and lockwasher. Apply torque seal to locking screw. (QA)

WARNING

After automatic parachute release has been assembled with delay cartridge firing pin is in a cocked position. Movement of arming cable from the parachute release in excess of 0.5-in. will cause actuation of the device.

28. AUTOMATIC PARACHUTE RIPCORD RELEASE ARMED CHECKOUT AND INSTALLATION IN CONTAINER.

a. Ensure arming device pin protudes (about 1/32-in.) from arming pin retainer (Figure 33).

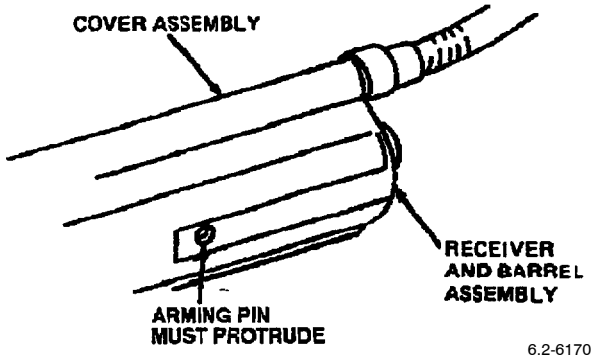


Figure 33. Ensure Pin Protudes

b. Ensure roll pin is visible and centered ± 1/8-in. in viewing hole (Figure 34).

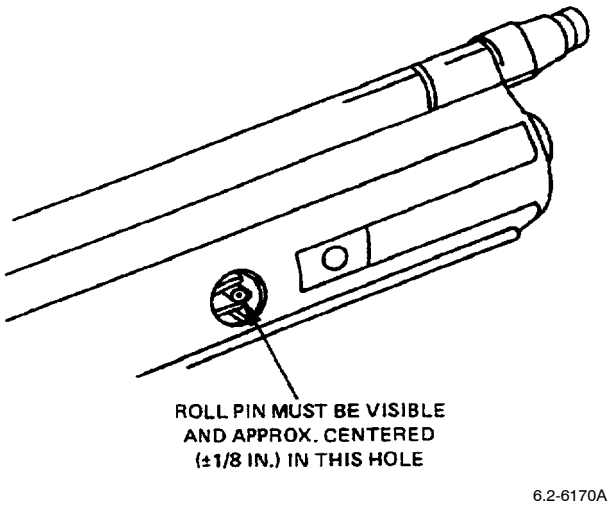


Figure 34. Ensure Pin is Visible

c. Ensure cover locking screw is installed with torque seal applied (Figure 35).

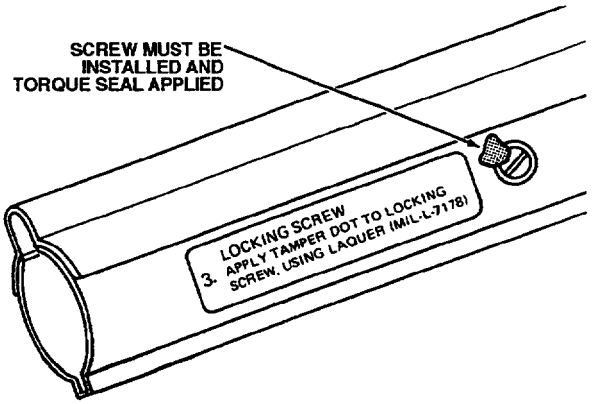


Figure 35. Ensure Locking Screw is Installed

d. Ensure aneriod indicator is in proper position for local elevation (Figure 36).

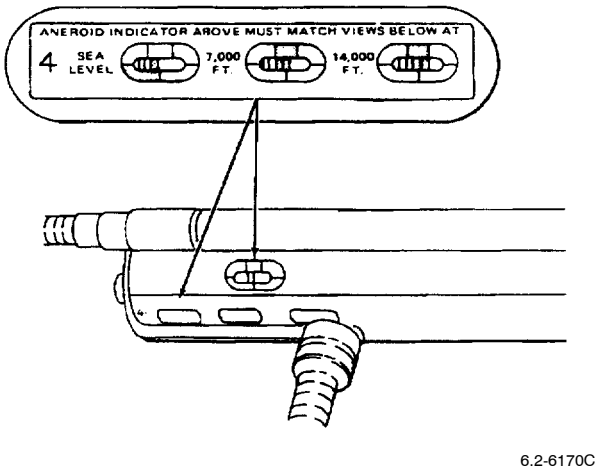


Figure 36. Ensure Aneriod Indicator is in Proper Position

e. Ensure cartridge is installed, look thru port and verify cartridge rim is visible (Figure 37). (QA)

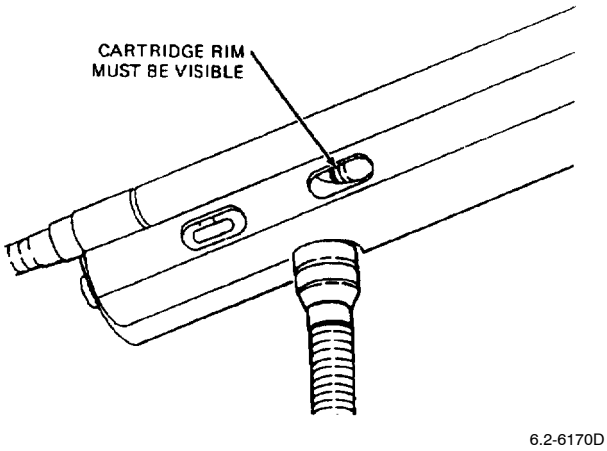


Figure 37. Ensure Cartridge is Installed

f. Insert ripcord release into pocket and close slide fastener.

29. ATTACHMENT OF FIRING LANYARD TO CONNECTOR LINK.

WARNING

Ensure that safety pin is installed in spreading gun.

a. At spreading gun, route firing lanyard between suspension lines 21 and 22 (Figure 38).

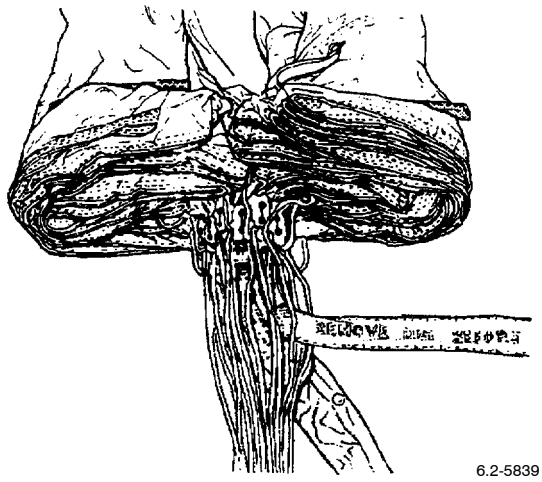


Figure 38. Routing of Suspension Lines

b. Slide canopy towards container and form S-folds in suspension lines large enough to allow loop in end of firing lanyard to align with connector links (Figure 39).

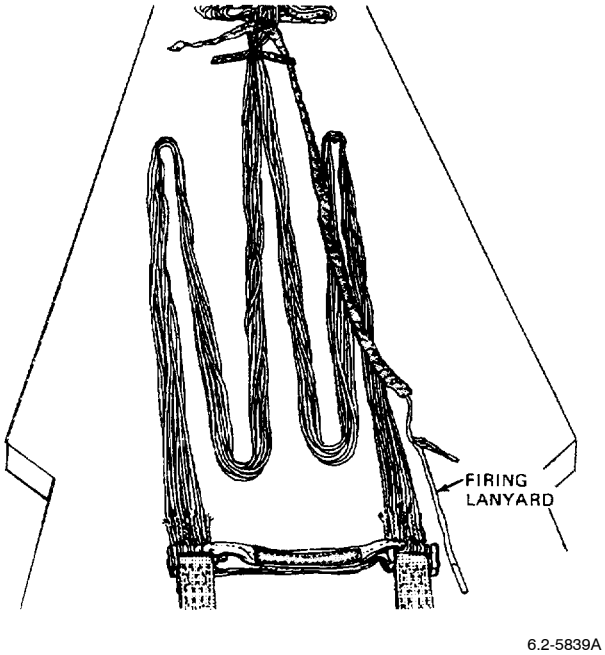


Figure 39. Slide Canopy Towards Container

WARNING

Ensure that no suspension lines are dropped from connector link bar.

Firing lanyard shall be routed in such a manner as to avoid encircling suspension lines.

c. Remove yoke and plate assembly from top connector link on helper's side.

d. Insert connector link bar thru loop in firing lanyard; reattach yoke and plate (Figure 40).

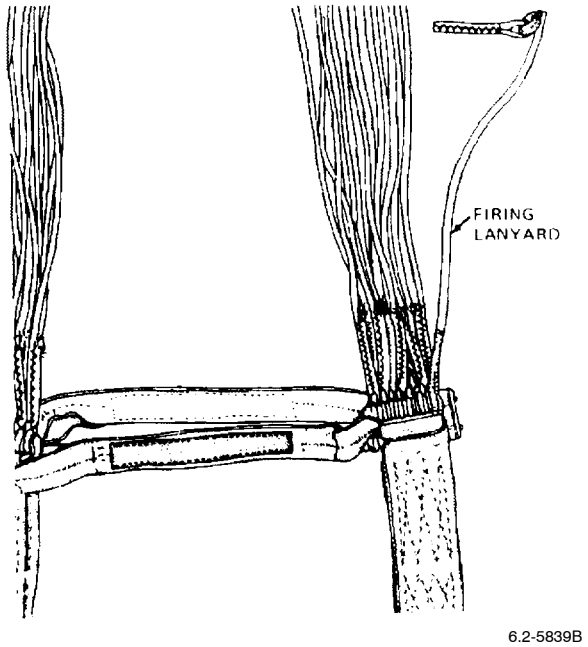


Figure 40. Insert Connector Link Bar thru Loop

e. Tighten screw to a torque value of 23 ± 2 in-lbs. (QA)

f. Apply torque seal to connector link screwhead.

30. ATTACHMENT OF CONNECTOR LINK TIES AND RISERS TO CONTAINER AND RELEASE LANYARD TO CONNECTOR LINK.

a. Cut two 23-in. lengths of Type I or IA nylon cord and sear ends. Do not use waxed cord, secure one end of each cord to grommets at bottom end of container with a bowline knot.

b. Remove the stud and eyelet fastener nearest to canopy release end. Slide the eyelet fastener out through the unsewn part of the webbing, between the two box-X stitching.

c. Position container on top of risers, inside facing up and end flap with ripcord base plate facing toward canopy. Insert risers into end flap slots at top of container (Figure 41).

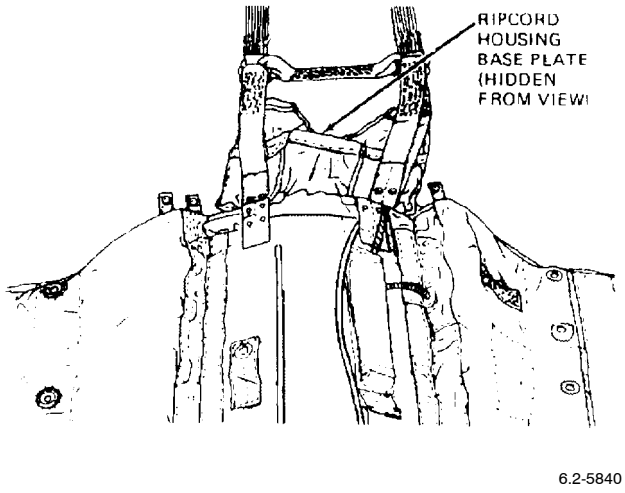


Figure 41. Position Container on Top of Risers

d. Remove connector links from tension hook and remove tension hooks from packing table.

e. Rotate risers onto container and secure riser fasteners to top two container fasteners (Figure 42).

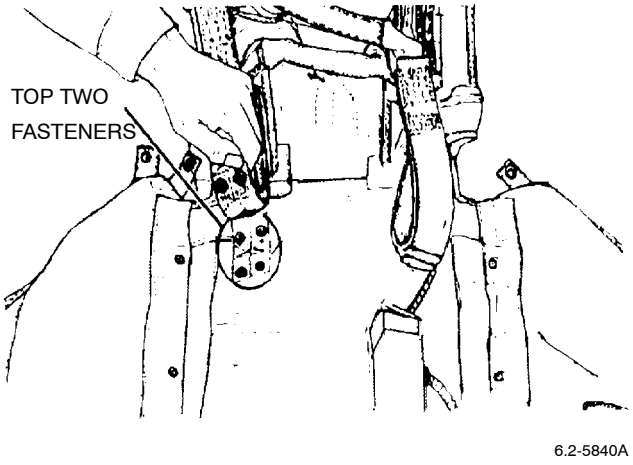


Figure 42. Rotate Risers onto Container

f. Position riser protection flaps over risers.

g. Position risers on container so connector links are on top of second metal stiffener from bottom. Spread suspension line groups outboard of each side of container.

h. Reeve release lanyard thru lanyard guide grommet. Position 36-in. mark on lanyard around bar on inboard side of bottom connector link on packer's side. Secure with a bowline knot followed by an overhand backup knot (Figure 43). (QA)

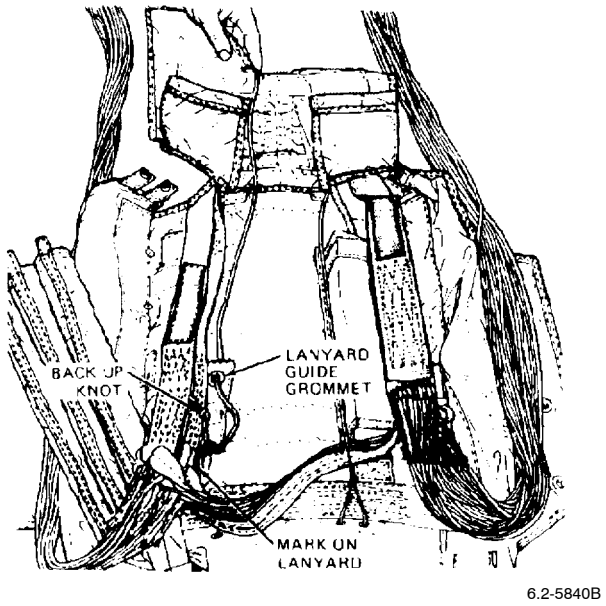


Figure 43. Reeve Release Lanyard thru Lanyard Guide

i. Route connector link ties thru container grommets to inboard side of connector links. Tie using three half-hitches, trim excess (Figure 44). (QA)

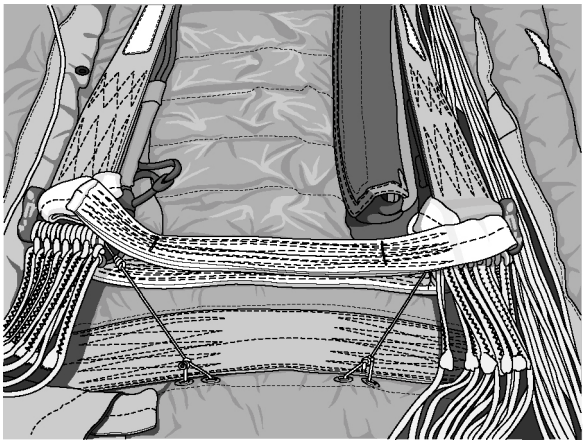


Figure 44. Tie Inboard Side of Connector Links

j. Place cross connector straps on the second stiffener from the bottom of container. Tack around cross connectors and thru container with 1 turn of size E thread, single and waxed; tie off (Figure 45).

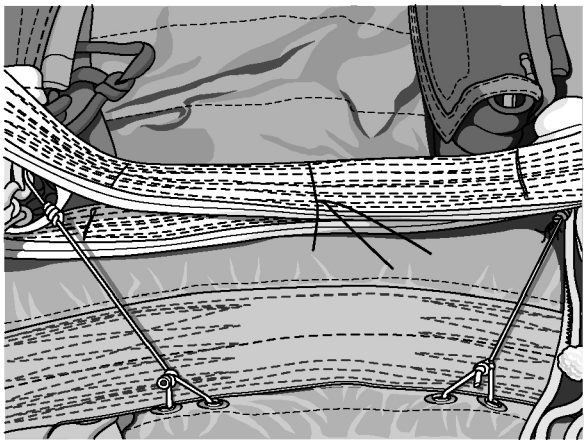


Figure 45. Tack Cross Connector Straps to Container

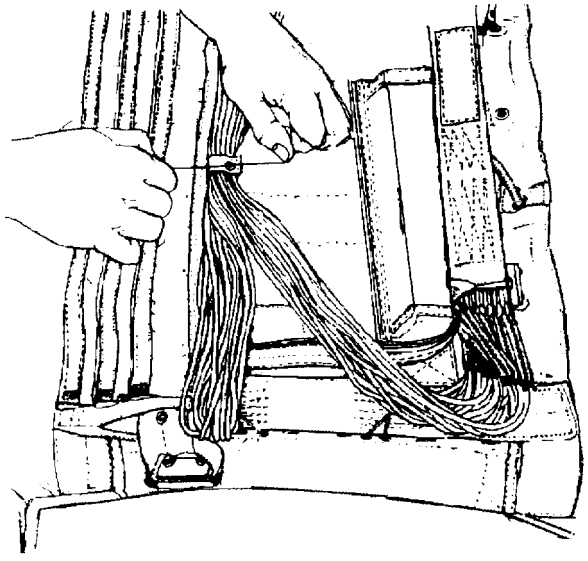
31. STOWAGE OF SUSPENSION LINES.

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Bring suspension lines together in center of container.

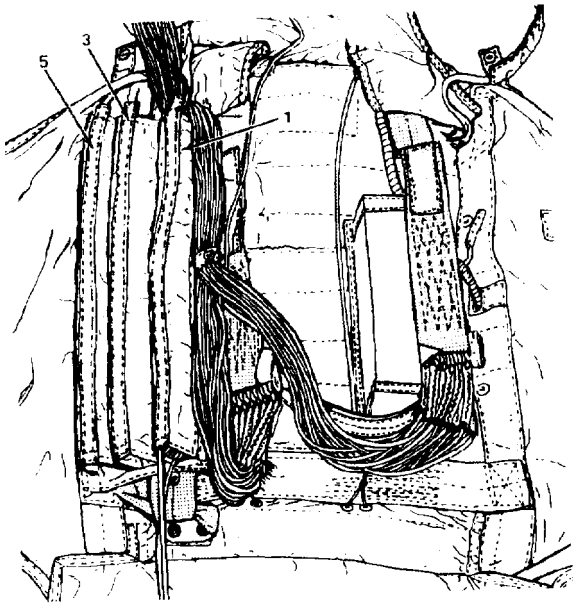
b. Secure suspension lines to tab on suspension line stowage sleeve with one turn of size FF thread, single and waxed; tie off (Figure 46).



6.2-5842

Figure 46. Secure Suspension Lines to Tab

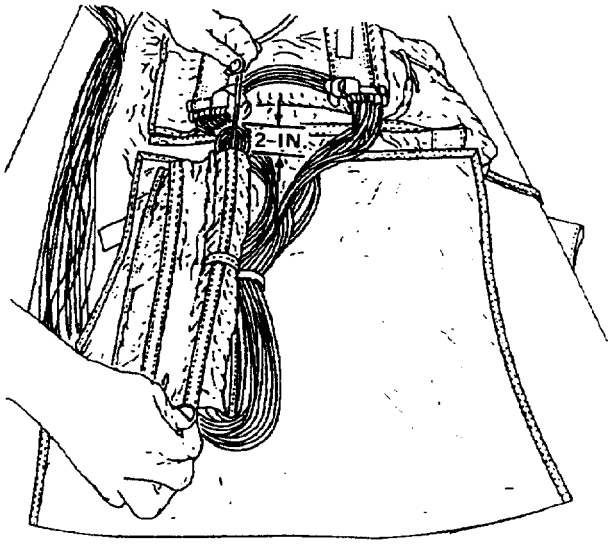
c. Stow first bight of suspension line in stowage pocket number 1. Suspension lines do not extend beyond pocket (Figure 47).



6.2-5842A

Figure 47. Stow First Bight of Suspension Line

d. Rotate sleeve and stow second bight in pocket number 2. Extend this bight, 1 1/2 to 2-in. beyond pocket (Figure 48).



6.2-5842B

Figure 48. Rotate Sleeve and Stow Second Bight

e. Rotate sleeve and stow remainder of suspension lines in respective pockets in same manner as step c, and to a point where the white mark, located on firing lanyard, is even with stowage sleeve. Adjust length of last stow as necessary (Figure 49).

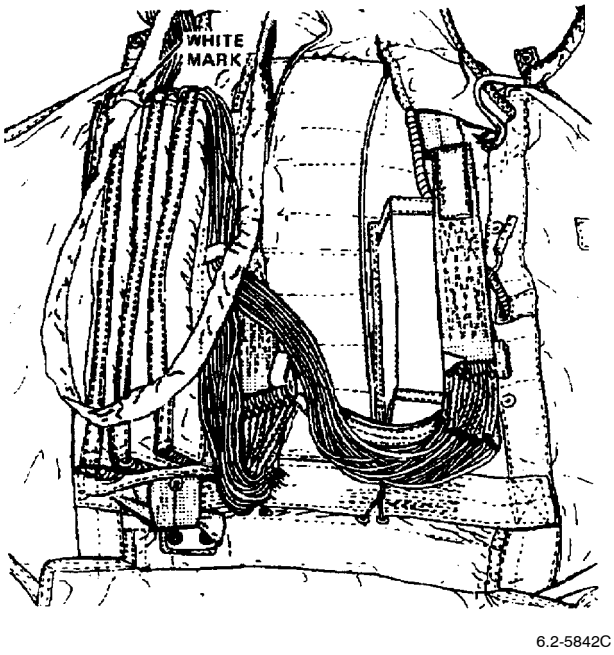


Figure 49. Rotate Sleeve and Stow Remainder of Suspension Lines

32. STOWAGE OF FIRING LANYARD IN CONTAINER.

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

WARNING

Ensure that safety pin is installed in spreading gun.

a. Starting with stowage pocket number 6, stow firing lanyard in reverse order of stowed suspension lines. Firing lanyard shall be stowed within stowage pockets between stowed suspension lines and outer pocket reinforcement tape. Avoid entanglement of firing lanyard with suspension lines (Figure 50).

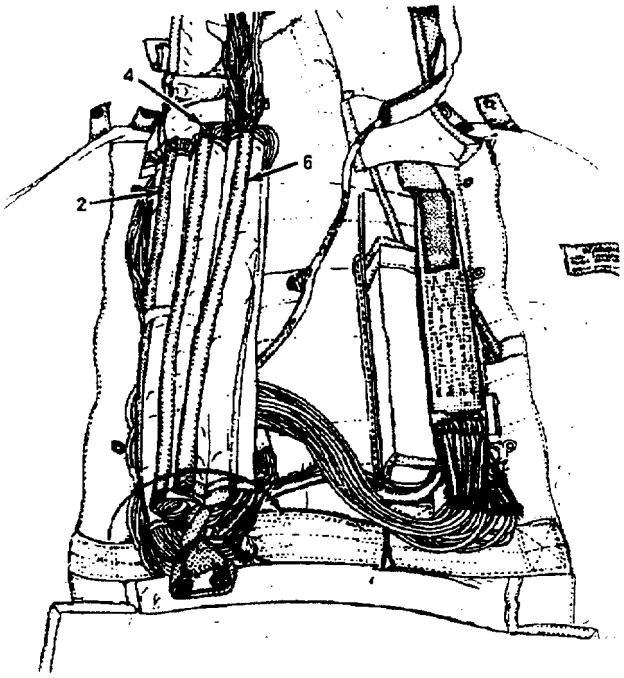


Figure 50. Stowing of Firing Lanyard

WARNING

Firing lanyard shall be routed in such a manner as to avoid encircling suspension lines.

b. Continue stowing firing lanyard with last stow in pocket number 4. Locking thong must be even with grommet in stowage sleeve attachment webbing (Figure 51).

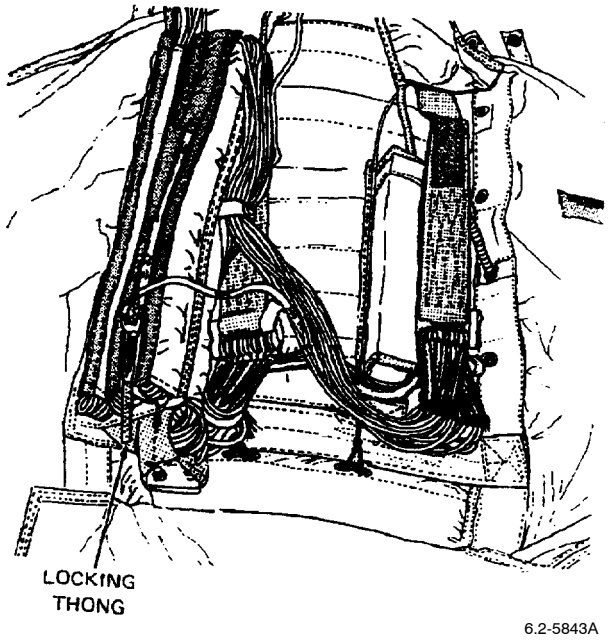


Figure 51. Continue Stowing Firing Lanyard

c. Cut an 18-in. length of Type II nylon tape. Pass one end of tape thru loop in suspension line stowed in pocket number 2 (Figure 52).

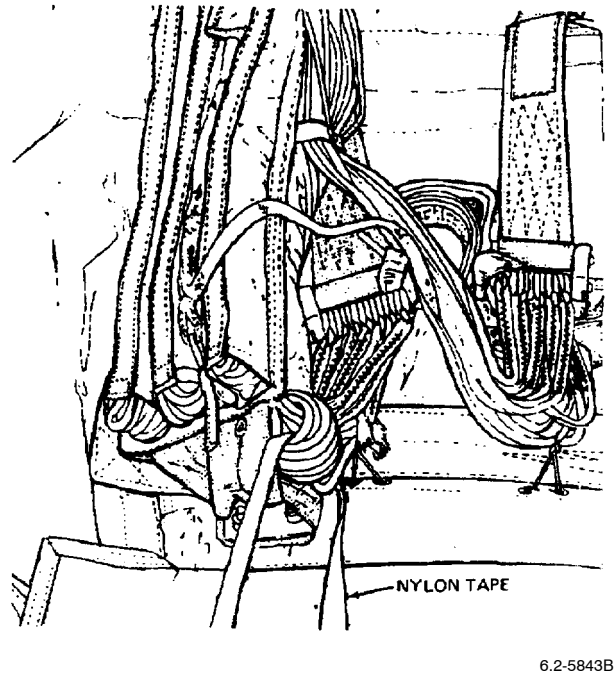


Figure 52. Cut an 18-in. Length of Nylon Tape

d. Form a loop in one end of tape and pass it thru grommet of stowage sleeve attachment webbing (Figure 53).

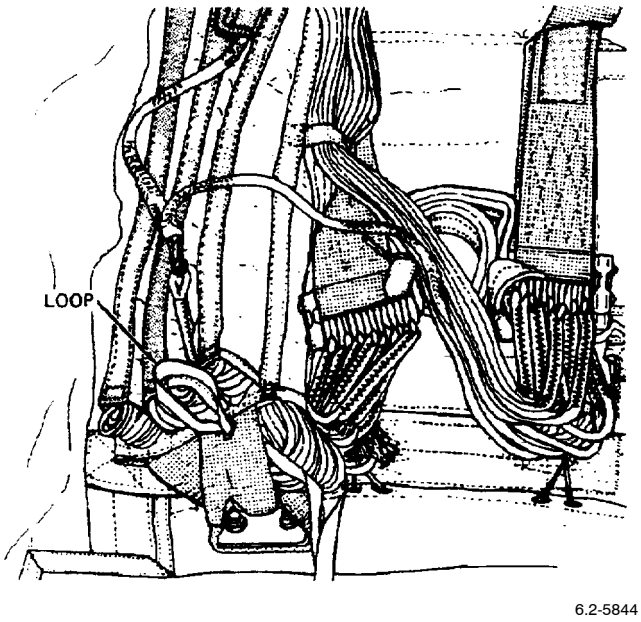


Figure 53. Form a Loop in One End of Tape

e. Route firing lanyard thong thru loop in nylon tape and draw tape tight (Figure 54).

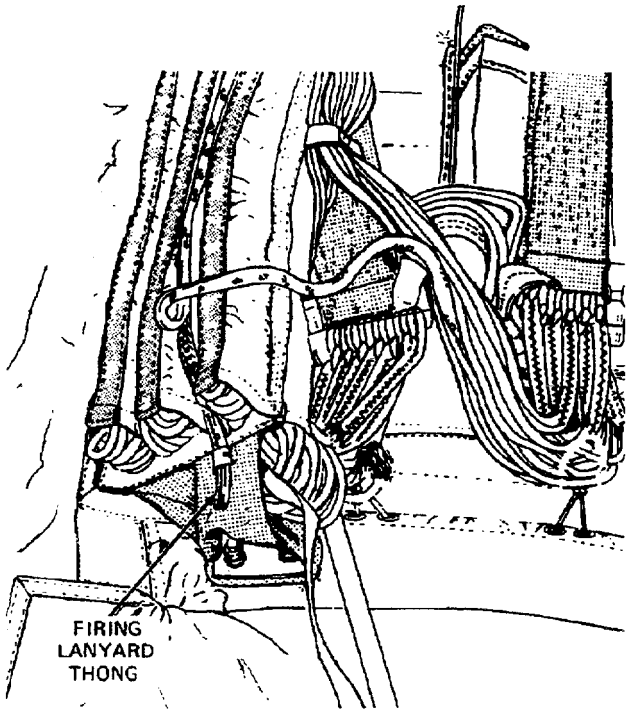


Figure 54. Route Firing Lanyard Thong thru Loop

f. Route free end of nylon tape thru stowage sleeve attachment loop (Figure 55).

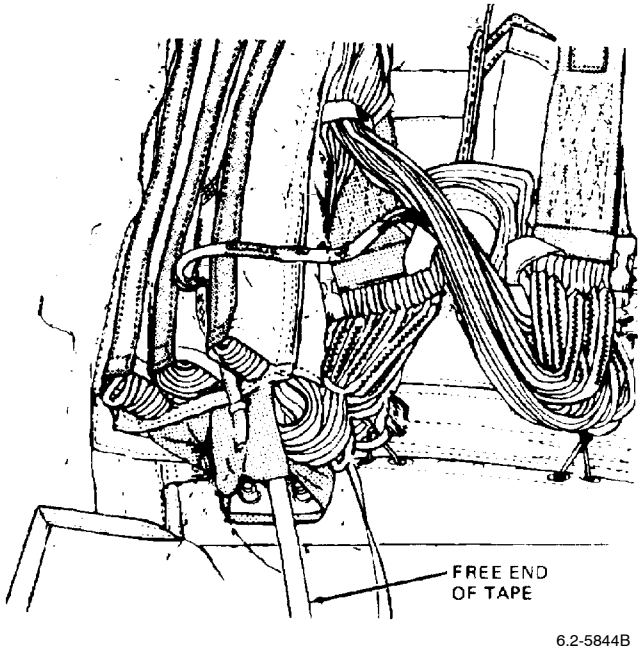


Figure 55. Route Tape Thru Stowage Sleeve

g. Draw tight and tie nylon tape to stowage sleeve attachment loop. Trim excess tape to 1/2-in (Figure 56).

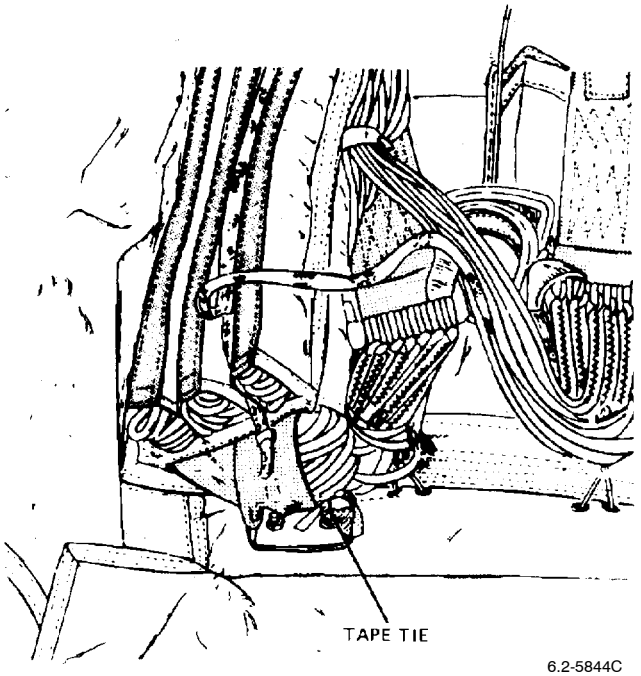


Figure 56. Draw Tight and Tie Tape

h. Safety-tie firing line thong to stowage sleeve attachment webbing with tacking passing thru thong and webbing, then back thru webbing and thong, using one turn of size FF thread, single and waxed; tie off (Figure 57).

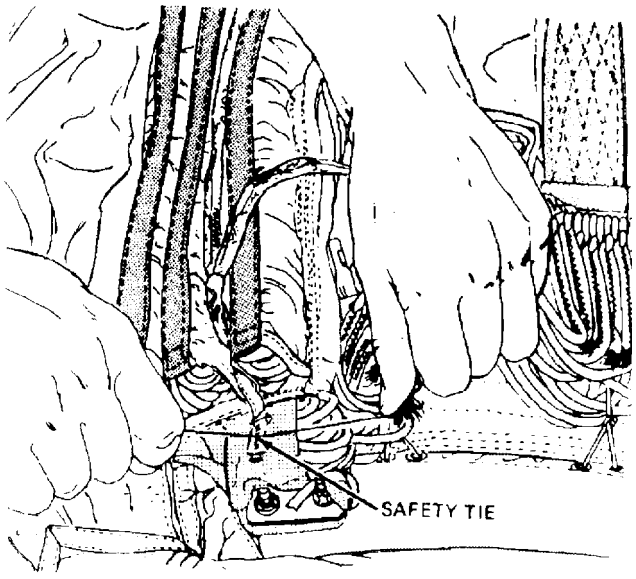


Figure 57. Safety-Tie Firing Line Thong

i. Tack slack in lanyard to stowage sleeve 2 1/2 ± 1/2-in. from bottom of stowage sleeve. Pass tacking thru lanyard and edge of binding tape, then back thru edge of binding tape and lanyard with one turn of size A thread, doubled and waxed; tie off (Figure 58).

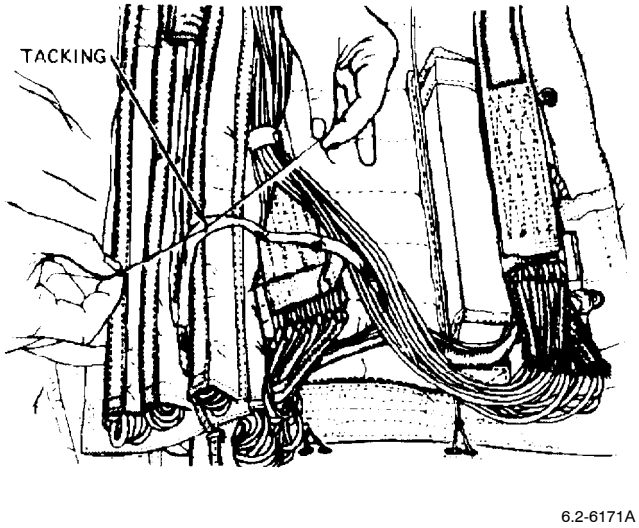


Figure 58. Tack Lanyard Slack

33. STOWAGE OF SPREADING GUN AND CANOPY.

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Six folds shall be made when stowing canopy. Use the following illustration as a guide while stowing canopy (Figure 59).

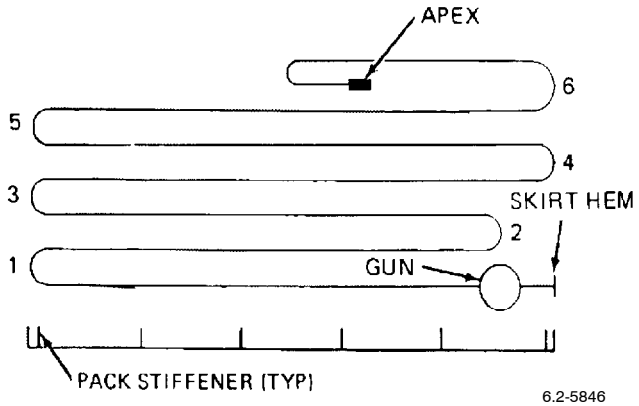


Figure 59. Six Folds Shall Be Made When Stowing

b. Fold suspension line cover flap over suspension lines (Figure 60).

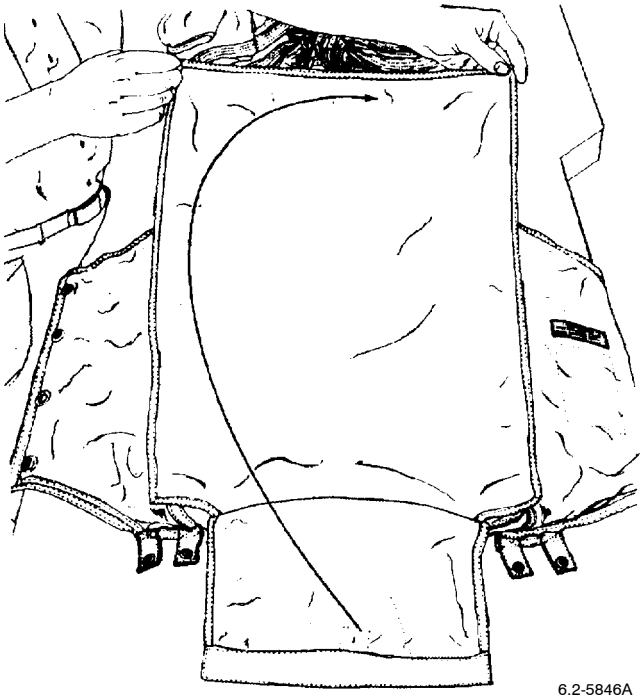


Figure 60. Fold Suspension Line Cover Flap

c. Tack both corners of cover flap to container with one turn of size FF thread, doubled and waxed, at each corner; tie off (Figure 61).

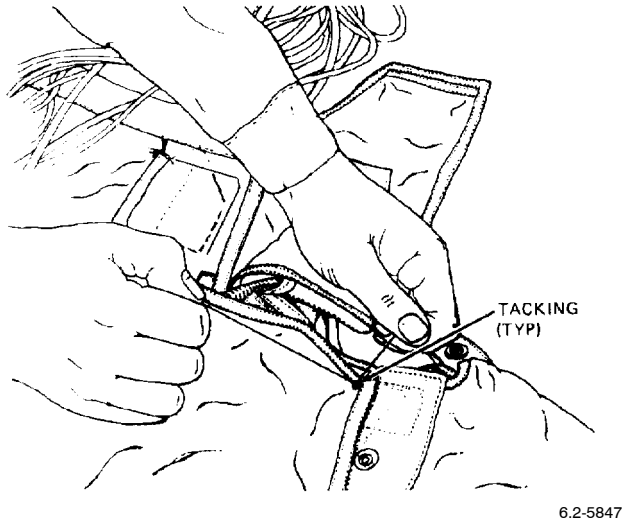


Figure 61. Tack Both Corners of Cover Flap

NOTE

Ensure that bottom of spreading gun faces towards packer's side.

d. Remove shot bags. Place canopy on container with bottom of spreading gun toward packer and centered between first and second container stiffeners from container bottom (Figure 62).

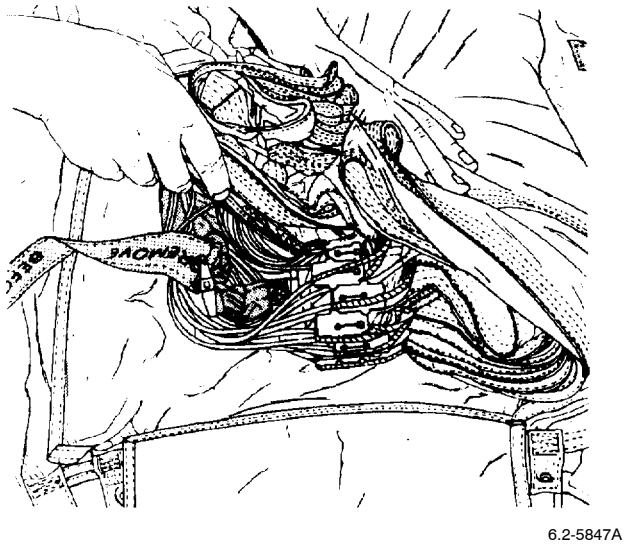


Figure 62. Placement of Canopy on Container

WARNING

Do not twist or pull on firing lanyard as this may accidentally fire spreading gun.

e. Remove spreading gun safety pin and pull skirt hem to bottom of container (Figure 63). (QA)

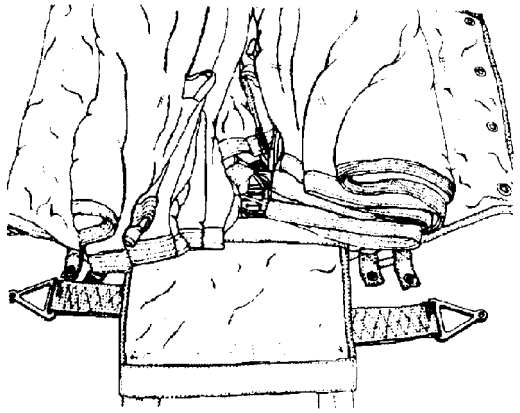


Figure 63. Remove Spreading Gun Safety Pin

f. To make first and second folds, place long bar on top of canopy, parallel with upper container edge. Grasp canopy about one container length from long bar and draw it across container (Figure 64).

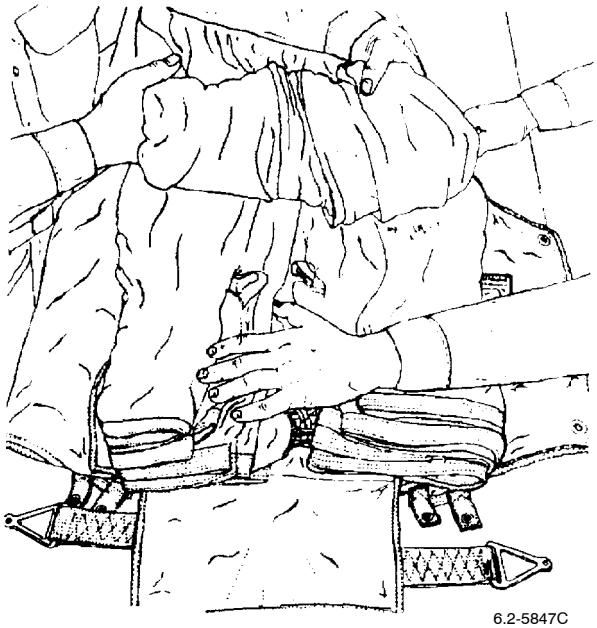


Figure 64. Placement of Long Bar on Canopy

g. Second fold shall be positioned slightly behind skirt hem. Sides of canopy shall spread 3 to 4-in. over sides of container (Figure 65).

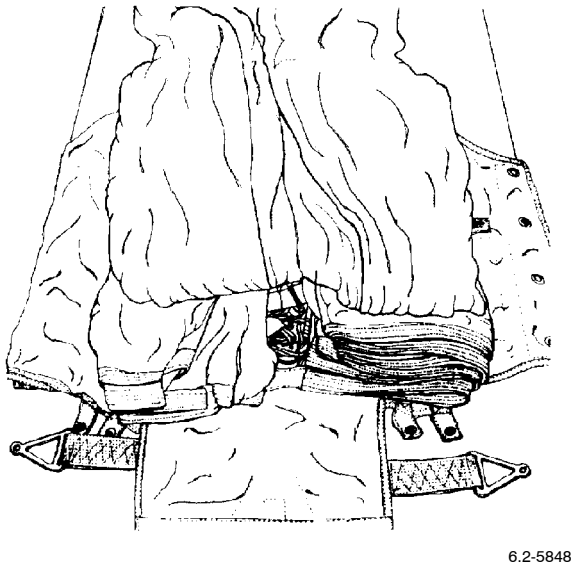


Figure 65. Positioning of Second Fold

h. To make third and fourth folds, helper shall use long bar in same manner as with first and second folds. Fourth fold shall extend to align with bottom container edge (Figure 66).

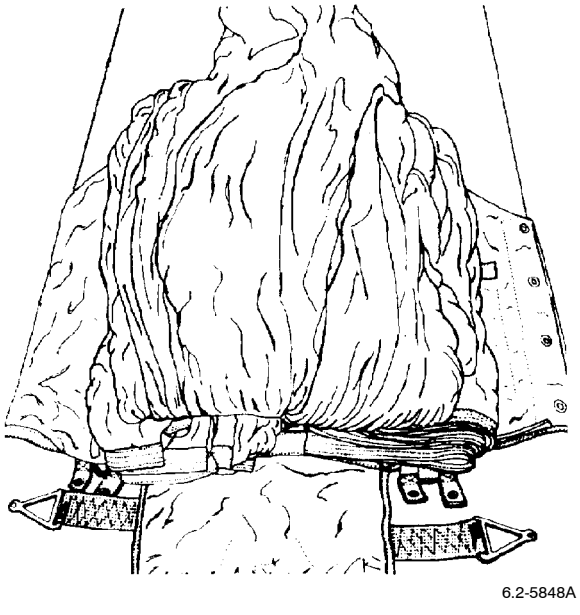
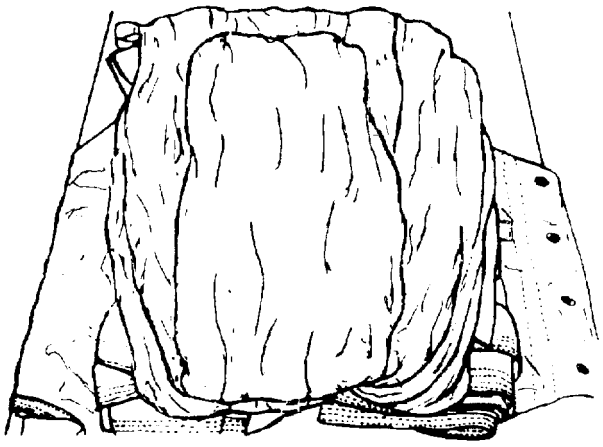


Figure 66. Positioning of Third and Fourth Folds

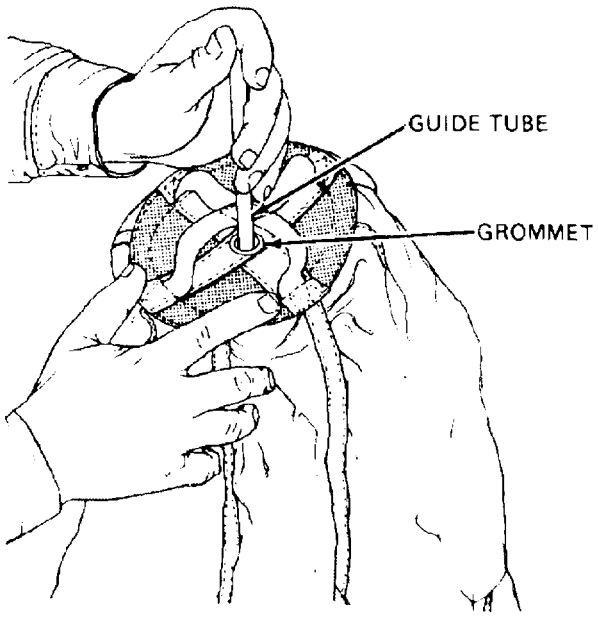
i. Continue accordion-folding remainder of canopy into container, maintaining canopy spread over sides of container. Six folds shall be made when stowing canopy with the last fold folded under (Figures 59 and 67).



6.2-5848B

Figure 67. Accordion Folding of Remainder of Canopy

j. Position pilot parachute vertically on packing table and insert guide tube into grommet in crown of pilot parachute. Extend guide tube to bottom of pilot parachute and position over locking cone on spring baseplate (Figure 68).



6.2-5848C

Figure 68. Positioning of Pilot Parachute

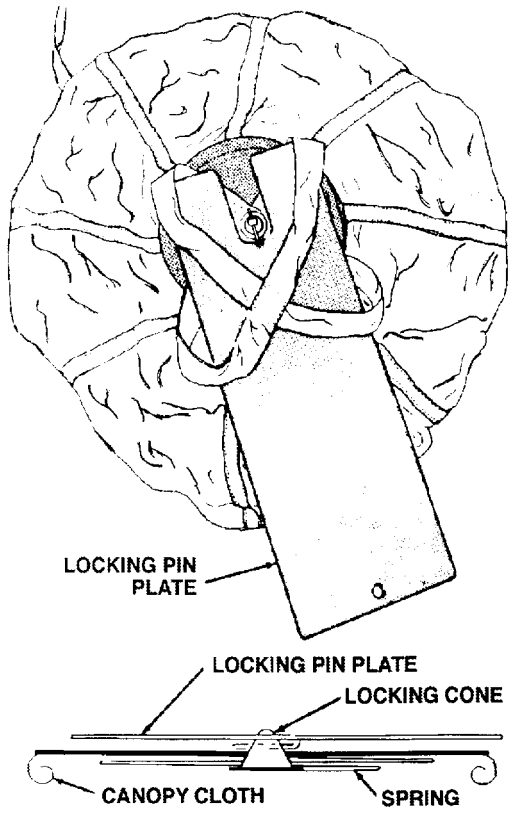
WARNING

Ensure pilot parachute cloth is not twisted around or entangled in compressed pilot parachute spring.

k. Compress pilot parachute spring and remove guide tube from locking cone. Locking cone shall protrude thru grommet. Insert temporary locking pin into top hole of locking cone.

l. Remove any pilot parachute cloth twisted around or entangled in compressed spring.

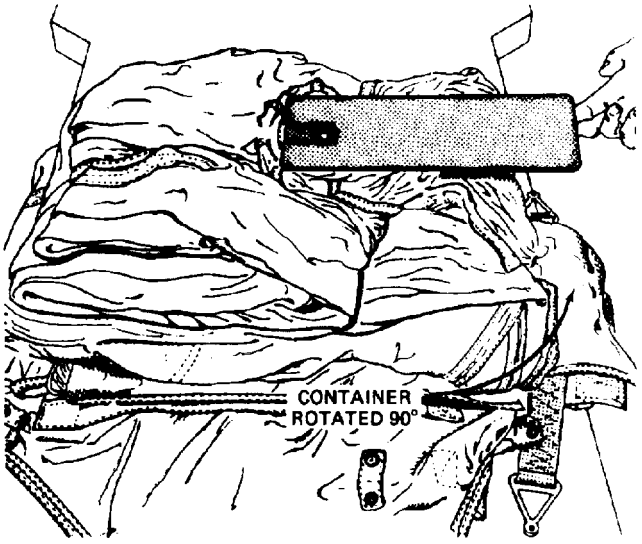
m. Insert pin on temporary locking pin plate into bottom hole of locking cone to keep pilot parachute compressed and then remove temporary locking pin from top hole of locking cone (Figure 69).



6.2-6172

Figure 69. Insert Pin on Temporary Locking Pin Plate

n. Place pilot parachute on top of last fold of canopy with locking cone aligned with second grommet from bottom edge of container and pin plate positioned toward bottom of container. Tuck pilot parachute cloth under outer edge of crown (Figure 70).



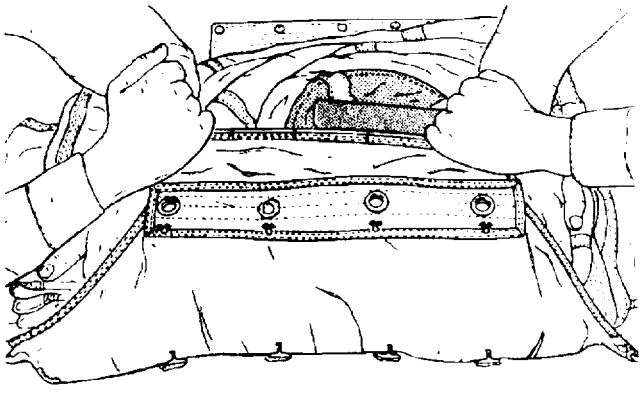
6.2-6172A

Figure 70. Place Pilot Parachute on Top of Canopy

o. Rotate parachute container 90-degrees counterclockwise.

34. CLOSING OF CONTAINER.

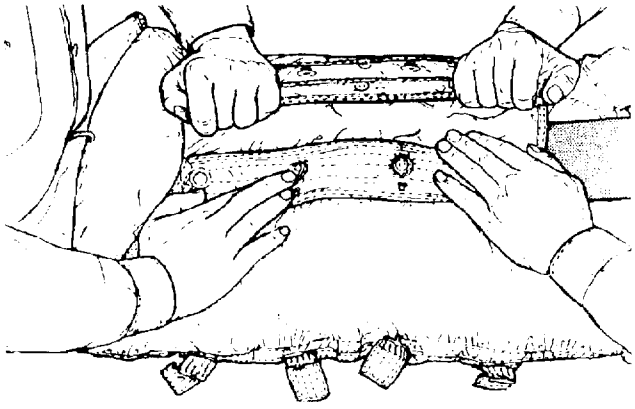
a. Pull side flap with locking cone over canopy and pilot parachute and align second grommet from bottom container edge over locking cone in pilot parachute (Figure 71).



6.2-5850

Figure 71. Pull Flap with Locking Cone Over Pilot Parachute

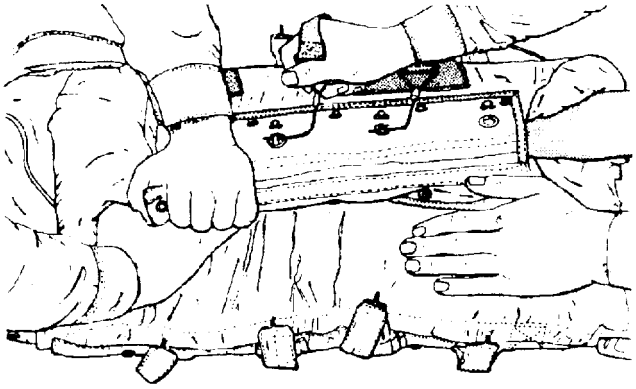
b. Pull side flap with grommets over canopy while holding side flap with locking cone in place. Keep canopy movement to a minimum (Figure 72).



6.2-5850A

Figure 72. Pull Side Flap with Grommets Over Locking Cone

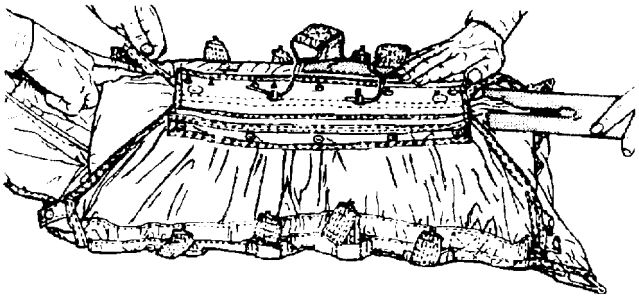
c. Place grommets over locking cones and insert two temporary locking pin toward top of container (Figure 73).



6.2-5850B

Figure 73. Place Grommets over Locking Cones

d. Remove temporary locking pin plate from pilot parachute locking cone and adjust canopy at both ends of container (Figure 74).



6.2-5850C

Figure 74. Remove Temporary Locking Pin Plate

e. Tuck top end flap under side flap using two long bars inserted in pockets (Figure 75).

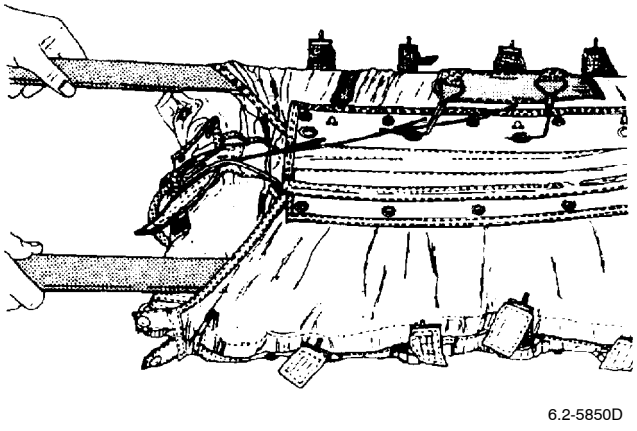


Figure 75. Tuck Top End Flap Under

f. Place side flap grommets over top end flap locking cone and insert temporary locking pin toward top of container (Figure 76).

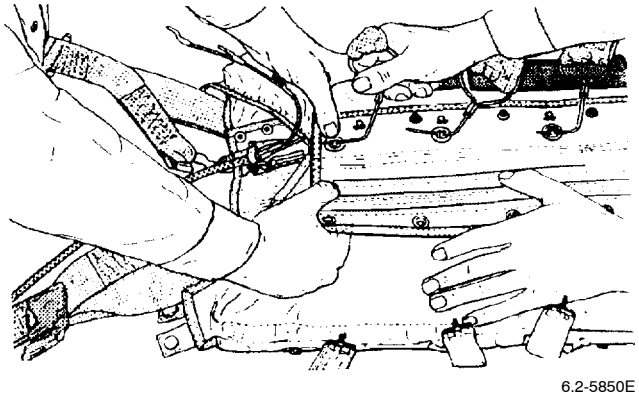


Figure 76. Place Side Flap Grommets Over Top End Flap

g. Tuck bottom end flap under side flaps using two long bars inserted in pockets. Place side flap grommets over bottom end flap grommets and insert temporary locking pin toward top of container (Figure 77).

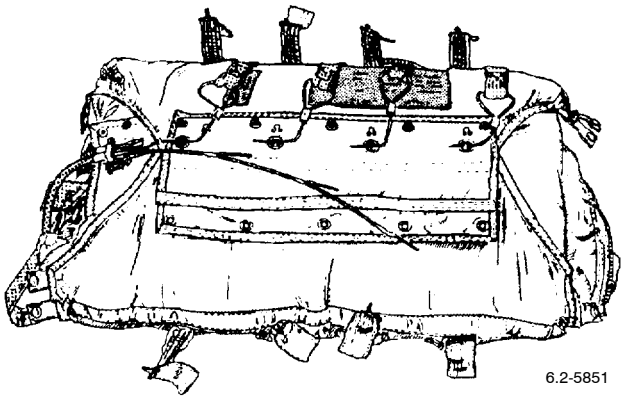


Figure 77. Tuck Bottom End Flap Under Side Flaps

h. Push riser protector flaps firmly into container using packing fid inserted into pockets.

i. Remove wrinkles in corners of container using packing fid (Figure 78).

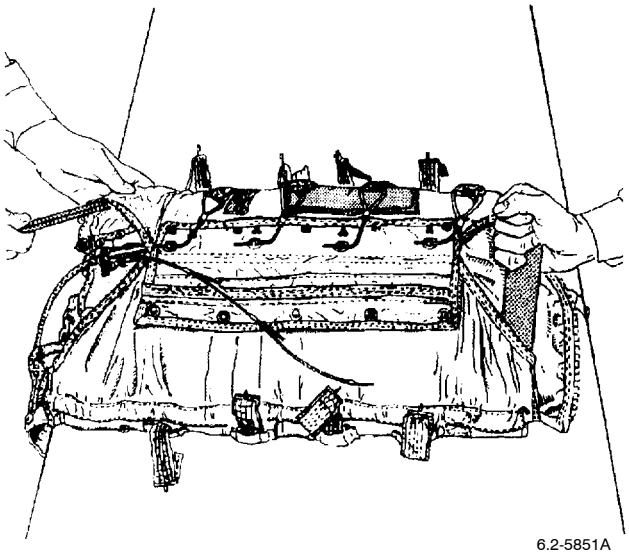


Figure 78. Remove Wrinkles in Corners

WARNING

Use of pin(s) as an alignment aid during installation may cause bending of pin(s) and result in excessive pull forces.

NOTE

Ensure that ripcord pins are centered in locking cones so that shoulder of ripcord pin is not jammed against locking cone, but extends more than 1/4-in. beyond base of grommet.

j. Pass top ripcord pin thru beveled side of automatic ripcord release power cable eye. Remove temporary locking pin from locking cone nearest ripcord housing. Insert top ripcord pin. pin shall extend more than 1/4-in. beyond base of grommet (Figure 79).

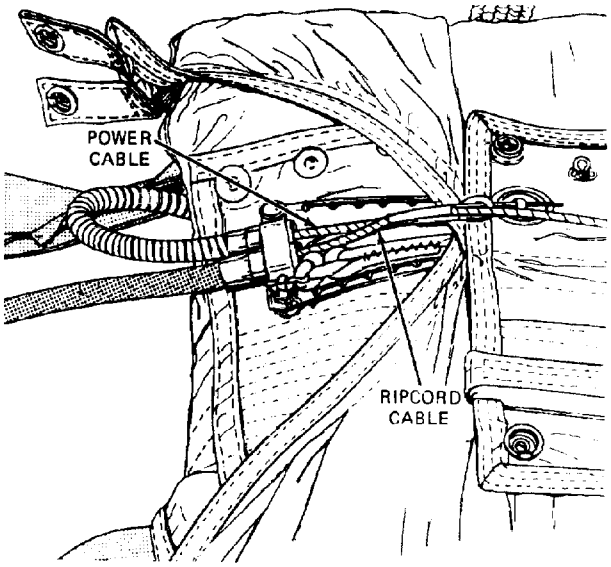


Figure 79. Pass Top Ripcord Pin thru Beveled Side of Ripcord Release

k. Continue to remove temporary locking pins from top of container to bottom, simultaneously insert ripcord pins into locking cones. Pin shall extend more than 1/4-in. beyond base of grommets.

l. Attach spring opening assemblies to eyes on side flaps. Temporarily stow arming cable housing under opening assemblies (Figure 80).

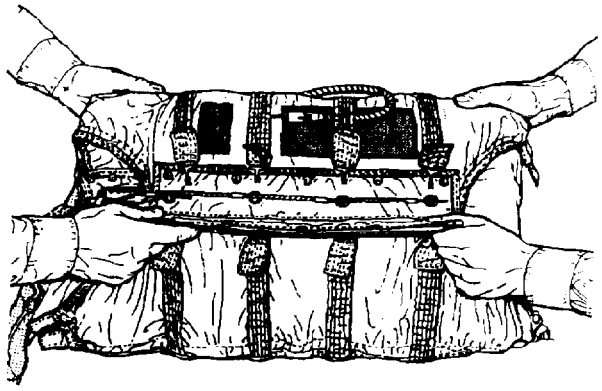


Figure 80. Attach Spring Opening Assemblies

m. Turn container over and secure eight corner keepers to fasteners on container.

n. Turn container over so ripcord pins face up.

35. RIPCORD PIN PULL CHECK AND SAFETY TYING BOTTOM RIPCORD LOCKING PIN AND RIPCORD HOUSING CLIP.

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Insert ripcord pin lock on bottom ripcord pin (Figure 81).

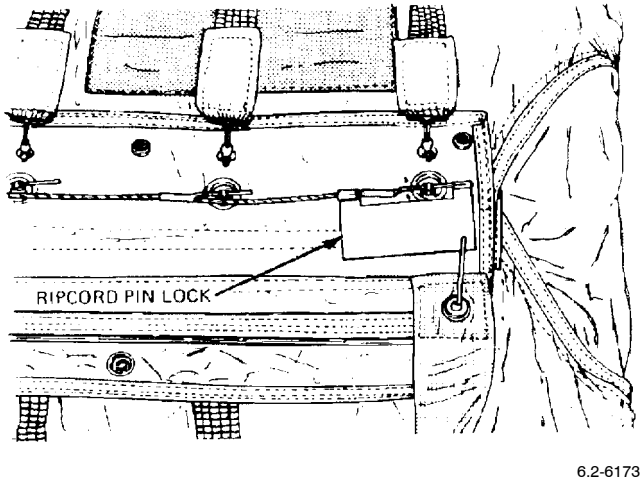


Figure 81. Insert Ripcord Pin

b. Install ripcord grip in retainer and attach spring scale to ripcord grip with a nylon cord.

c. Apply a straight steady pull and remove ripcord grip from retainer. Force required to remove grip from retainer clip is 15 ± 5 lbs. (QA)

d. If full force is not within limits, use a pliers to adjust ripcord grip retainer. Ensure plier jaws are covered with protective material. After adjustment, repeat ripcord grip pull test.

e. Reset scale to zero. Apply a straight steady force to ripcord grip until initial movement of bottom ripcord pin is observed. Most allowable force is 27 lbs. (QA)

WARNING

Ripcord pinlock must be removed.

f. Remove ripcord pinlock. (QA)

g. Reposition ripcord pins so they are centered in locking cones with shoulder of each pin extending more than 1/4-in. beyond base of grommet.

h. Insert ripcord housing clip into webbing loop attached to riser and insert ripcord grip into retainer (Figure 82).

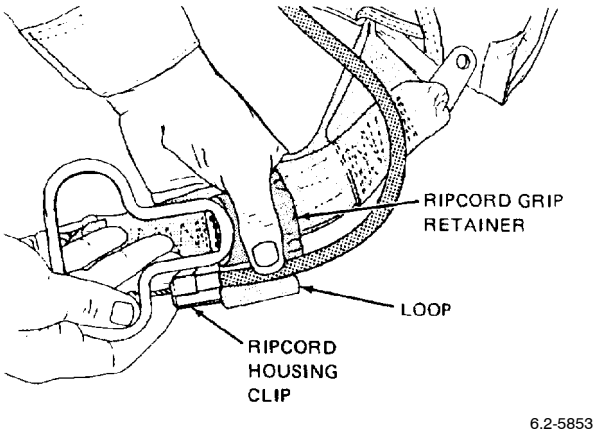


Figure 82. Insert Ripcord Housing Clip into Webbing Loop

i. Tack thru loop and thru hole in ripcord housing clip with one turn of size E thread, single and waxed. Tie off (Figure 83).

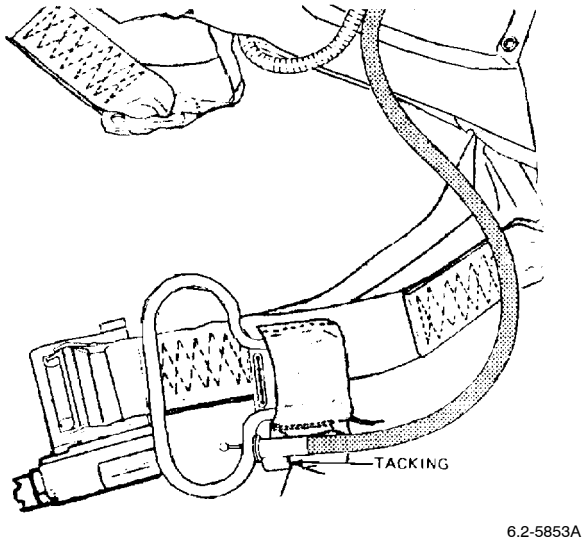


Figure 83. Tack thru Loop and thru Hole

j. Loop a 12-in. length size E thread, single and waxed, under bottom ripcord pin. Secure pin by bringing thread ends together and tying 3 to 5 half-hitches around ripcord cable above ripcord pin ferrule. Top off with a binder knot. Trim excess within 1/2 to 3/4-in. from knot (Figure 84). (QA)

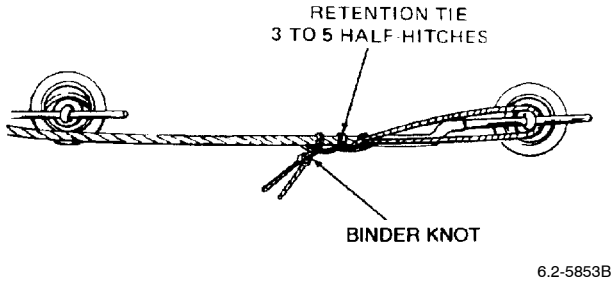


Figure 84. Secure Pin

36. STOWAGE OF SPREADING GUN SAFETY PIN FLAG.

a. Position spreading gun safety pin flag on table with securing strap facing down and safety pin as shown. Fold flag with safety pin tucked inside so that securing strap faces up (Figure 85).

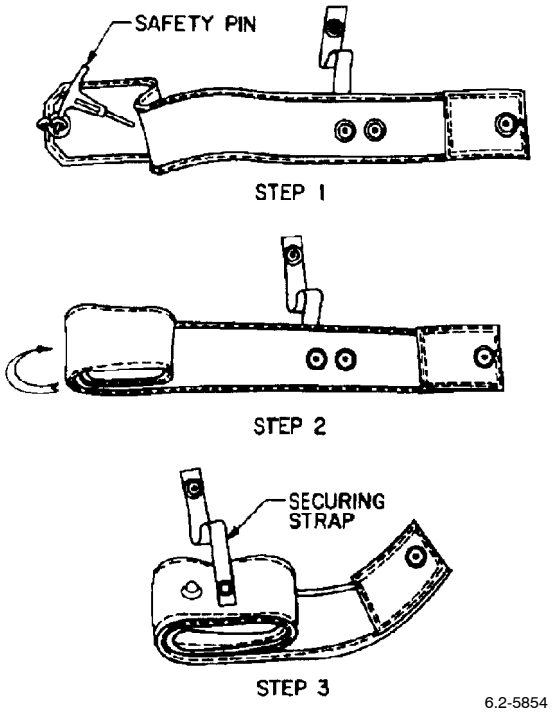


Figure 85. Positioning of Spreading Gun Safety Pin Flag

b. When flag is completely folded, pass securing strap around left kit retention strap between container and lap belt (ripcord handle side). Close snap fastener. Close flag snap fastener (Figure 86). (QA)

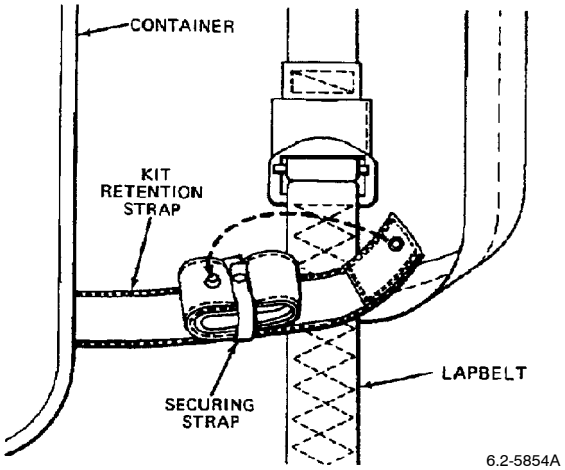


Figure 86. Securing of Safety Pin Flag

37. PARACHUTE HARNESS SENSING RELEASE UNIT (PHSRU), MXU-746/P AND MXU-747/P.

a. Measure the knurled actuating lever torque as follows:

(1) Hold locking lever in the open position and insert the torque meter with 1/16-in. hex head driver into actuating lever cavity.

(2) Rotate actuating lever to just prior to contact with body. Acceptable torque values are 28 to 50 in-oz. (Figure 87). (QA)

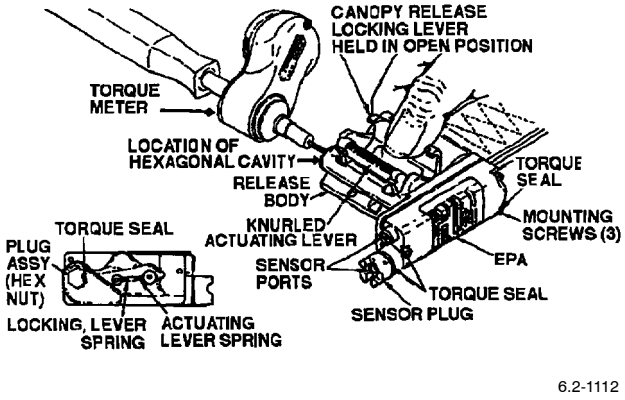


Figure 87. Rotate Actuating Lever

b. Check battery voltage as follows:

(1) Install test leads in multimeter observing proper polarity.

(2) Select VDC and scale exceeding 26 VDC.

CAUTION

Avoid touching the meter probes together when making this test. Firing of the PHSRU may result.

(3) Contact negative (black) probe to sensor plug assembly center conductor. Contact positive (red) probe to EPA sensor center conductor.

(4) Reading of +22.5 volts DC or greater indicates PHSRU is serviceable. (QA)

c. If plug assembly was removed, perform the following:

(1) Forward complete packed parachute assembly to either non-destructive inspection lab or medical facility for X-ray.

(2) From review of X-ray (Figure 88), if plug assembly is suspected or known to be partially or fully recessed, the unit shall have a shear pin integrity check per WP 024 02.

(3) Record inspection on Parachute Record (OPNAV 4790/101).

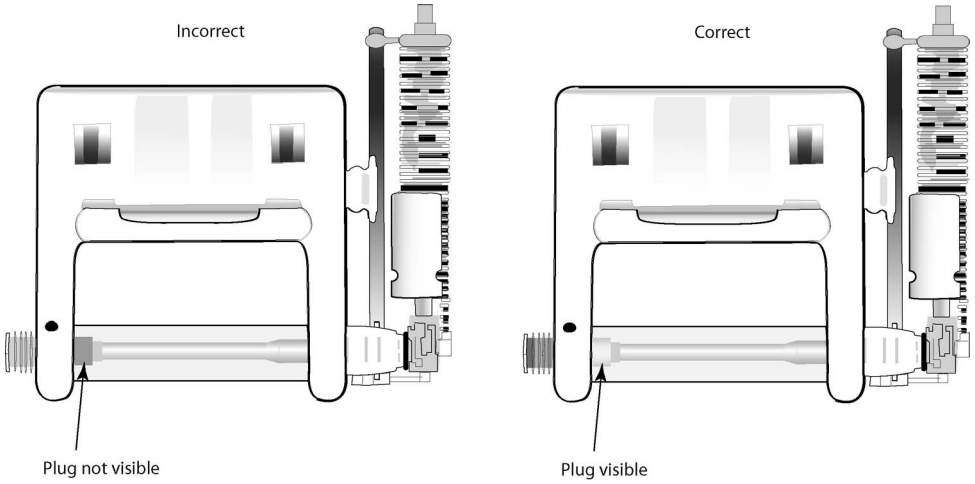


Figure 88. PHSRU X-Ray

(4) Attach X-rays to the Parachute Record (OPNAV 4790/101).

(5) If voltage is below +22.5 volts DC, replace battery per WP 024 02.

(6) Record voltage for each EPA in the Local Use Block on the Parachute Record (OPNAV 4790/101).

38. FINAL CHECKOUT.

a. Account for all packing tools and spreading gun safety pin. (QA)

b. Examine packed parachute for general condition.

c. Snap ripcord pin protector flap and ripcord baseplate flap closed.

d. Packer shall complete and sign Parachute Record (OPNAV 4790/101). (QA)

e. QA inspector shall examine completeness and accuracy of all entries on Parachute Record (OPNAV 4790/101).

f. QA inspector shall sign Parachute Record (OPNAV 4790/101).

g. Send a (legible) copy of new Parachute Record to: Commander, Code 461000D, NAVAIRWARCENWPNDIV, 1900 N Knox Road Stop 6206, China Lake, CA 93555-6106.

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INTERMEDIATE AND DEPOT MAINTENANCE

REPAIR PROCEDURES

NES-25A PERSONNEL PARACHUTE ASSEMBLY

PART NO. 926AS104-6

List of Effective Work Package Pages

Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.
1	10	2 thru 12	9	13	10	14	9

Reference Material

Alphabetical Index

Record of Applicable Technical Directives

None

1. INTRODUCTION.

a. This work package (WP) contains instructions for the maintenance, repair, replacement, and fabrication of various parachute parts or subassemblies to ensure that appropriate items of equipment remain in a ready-for-issue (RFI) status. Selected repairs shall be documented on the Parachute Record. For common repairs refer to WP 004 00.

2. REPAIR OF PILOT PARACHUTE AND BRIDLE LINE.

a. Repair of the pilot parachute and/or bridle line is limited to the following:

(1) Cleaning of contaminated areas.

(2) Replacement of loose or broken tacking.

b. Replace pilot parachute and/or bridle line for any of the following:

(1) Service/total life has expired per WP 020 02.

(2) Seam separations and loose or broken stitching (yarn separation is acceptable) that may affect the safe operation of the parachute assembly.

(3) Pilot parachute spring is broken or distorted.

(4) Pilot parachute locking cone or grommet is loose or damaged.

(5) Bridle line finished length is incorrect.

3. REPLACEMENT OF PILOT PARACHUTE.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Inspect replacement pilot parachute per WP 020 02.

b. Remove tacking at Lark's head knot and then remove pilot parachute.

c. Place either loop end of bridle line thru loop in pilot parachute. Route entire pilot parachute thru bridle loop and pull tight forming a Lark's head knot. Tack with two turns of size 6 thread, single and waxed; tie off.

d. Count 14 lines in sequence. Pass free loop of bridle around the 14 lines. Form a Lark's head knot by passing entire pilot parachute thru loop of bridle and pull tight.

e. Mark date placed in service on pilot parachute. Make proper entries on Parachute Record (OPNAV 4790/101). (QA)

4. REPLACEMENT OF PILOT PARACHUTE BRIDLE LINE.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Inspect replacement bridle line for cuts, fraying, and loose or broken stitching.

b. Measure length of bridle line. Proper length is 30 ± 1/2-in. unattached.

c. Remove tacking on Lark's head knot at pilot parachute loop and then remove pilot parachute from bridle line.

d. Remove bridle line from apex lines.

e. Pass either loop end of bridle line thru loop in pilot parachute. Form a Lark's head knot by passing opposite end of bridle thru loop and pulling tight. Tack with two turns of size 6 thread, single and waxed.

f. Count 14 lines in sequence. Pass free loop of bridle around the 14 lines. Form a Lark's head knot by passing entire pilot parachute thru loop of bridle and pull tight.

g. Attach tension strap hook to vent lines and pull tight.

h. Mark date placed in service on connector strap. Make proper entries on Parachute (OPNAV 4790/101). (QA)

5. REPLACEMENT OF PILOT PARACHUTE BRIDLE LINE LOOSE OR BROKEN TACKING.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Remove thread from broken tacking or completely remove loose tacking.

b. Pull Lark's head knot tight.

c. Tack Lark's head knot at pilot parachute with two turns of size 6 thread, single and waxed; tie off. (QA)

6. REPLACEMENT OF CANOPY ASSEMBLY.

Support Equipment Required

Part Number	Nomenclature
Refer to WP 005 00	Temporary Locking Pin
—	Torque, Screwdriver

Materials Required

Specification or Part Number	Nomenclature
F-900 Torque Seal (Color Optional)	Sealing Compound
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

For Double "L" Connector Link, refer to Paragraph 26 for disassembly, assembly, and inspection instructions.

a. Remove pilot parachute and bridle line from vent lines. Retain for reinstallation.

b. Remove four-line release rigging from connector links and then remove lanyard from flutes.

c. Remove spreading gun.

d. Remove connector link yoke and plate assemblies.

e. Remove connector links from risers and cross-connector straps and then reinstall yoke and plate assemblies.

f. Dispose of canopy assembly per current supply directives.

g. Lay out replacement canopy and stretch it to it's full length on clean packing table.

h. Attach tension strap hook to canopy vent lines.

i. Locate gore 28 (nameplate gore) and place it upper-most in center of packing table.

j. At skirt hem, separate suspension lines into two equal groups with lines 1 thru 14 on packer's side and 28 thru 15 on helper's side (Figure 1). Grasping each group of lines, walk from skirt hem to connector links removing any dips and twists between two groups (Figure 1).

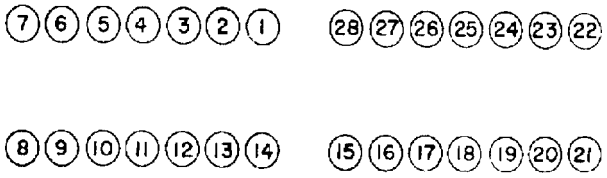

Figure 1. Arrangement and Orientation of Suspension Lines on Connector Links

k. Place connector link holding lines 1 thru 7 on top of connector link holding lines 8 thru 14. Place connector link holding lines 28 thru 22 on top of connector link holding lines 15 thru 21. Insert tension hooks into connector links and insert hooks into packing table (Figure 1).

l. Apply slight tension to canopy until suspension lines are taut.

m. Pull vent collar down toward canopy and adjust hem, align exposed vent hem (Figure 2).

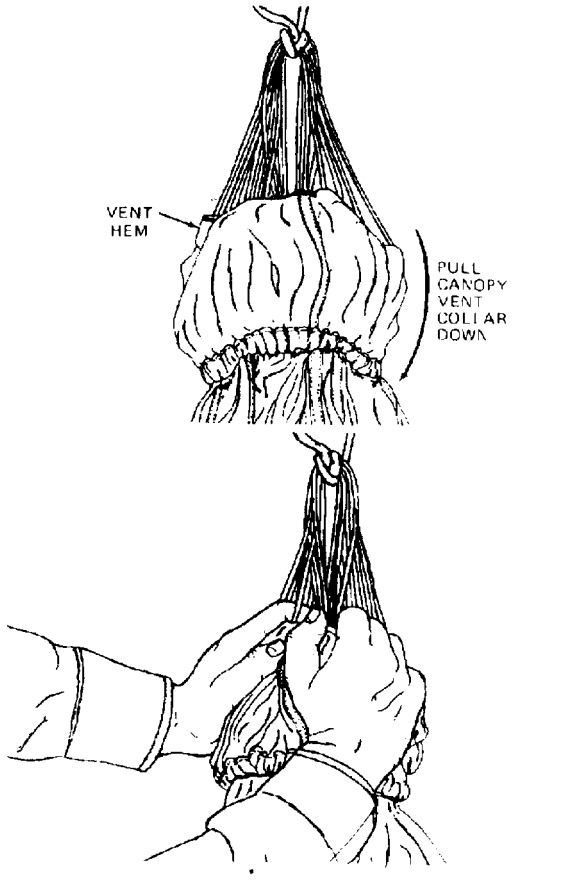

Figure 2. Adjustment of Vent Hem

n. Pull vent collar back to its original position.

o. Check suspension line continuity on left side of gore 28. Packer shall grasp line 1 at skirt hem and raise to a sufficient height to ensure line is free of dips and twists. Continue this procedure with lines 2 thru 14 (Figure 1). Helper shall be positioned at connector links to check lines selected by packer. (QA)

p. Check suspension line continuity on right side of gore 28. Packer shall grasp line 28 at skirt hem and raise to a sufficient height to ensure line is free of dips and twists. Continue this procedure with lines 27 thru 15 (Figure 1). Helper shall be positioned at connector links to check lines selected by the packer. (QA)

q. Inspect four-line release anchor loops for proper attachment to lines 3 and 26. Measure 30 ± 1/2-in. above upper connector link bar. Anchor loops must be attached with 2-in. zig zag stitching.

r. Continue to inspect canopy assembly per WP 020 02.

s. Reattach pilot parachute, bridle line and spreading gun retainer cord.

t. Lay out risers and cross-connector straps on packing table.

u. Remove connector links from tension hooks. Remove tension hooks from packing table.

v. Remove connector link yoke and plate assemblies from bottom connector links.

w. While maintaining continuity, slide suspension lines onto a temporary locking pin or rod.

x. Insert bottom connector links thru loop in each cross-connector strap and then thru loops in bottom risers.

CAUTION

Ensure that clove-hitch and half-hitch at ends of suspension lines do not separate during handling.

y. Reinstall suspension lines 3 thru 7 and 26 thru 22 on respective connector links.

z. Reattach yoke and plate assemblies to bottom connector links ensuring knurled portion of plate faces up and screw-heads face outboard.

aa. Remove connector link yoke and plate assemblies from top connector links.

ab. Insert top connector links thru loop in each cross-connector strap and then thru loops in top riser.

ac. Reattach yoke and plate assemblies to top connector links ensuring knurled portion of plate faces up and screwheads face outboard.

ad. Insert tension hooks into connector links and then tension canopy.

ae. Perform suspension line continuity check per steps o and p.

NOTE

Top right connector link screwhead will be torqued after attachment of spreading gun firing lanyard.

af. Tighten screws on top left and bottom left connector links to a torque value of 20 to 25 in-lbs. (QA)

ag. Apply torque seal to each connector link screwhead.

ah. Reattach spreading gun.

ai. Mark date placed in service on canopy assembly. Make proper entries on Parachute Record (OPNAV 4790/101). (QA)

aj. Fabricate four-line release lanyards, if required.

ak. Attach four-line release lanyards to suspension lines 3 and 26.

al. Rig four-line release lanyards.

7. REPLACEMENT OF RISER ASSEMBLY.

Support Equipment

Part Number	Nomenclature
Refer to WP 005 00	Bodkin

Materials Required

Specification or Part Number	Nomenclature
F-900 Torque Seal (Color Optional)	Sealing Compound
V-T-295	Thread, Nylon, Size FF, Type I or II, Class A

NOTE

For Double "L" Connector Link, refer to Paragraph 26 for disassembly, assembly, and inspection instructions.

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Remove ripcord assembly from riser.

b. Remove parachute harness sensing release units from risers per WP 024 02.

c. Remove four-line release tackings from flutes and carefully remove release lanyards from flutes. Insert temporary locking pin into last four-line release daisy chain.

d. Remove connector link yoke and plate assemblies.

e. Slide riser loops off connector link bar.

f. Reinstall yoke and plate assemblies.

g. Ensuring that suspension line continuity is maintained, insert connector links onto tension hooks.

h. Inspect replacement risers per WP 020 02.

i. Lay out replacement risers on packing table (Figure 3).

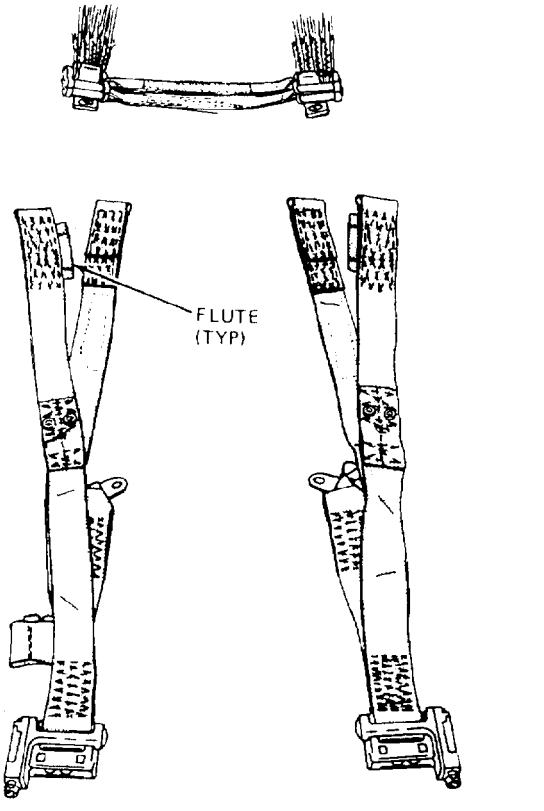

Figure 3. Replacement of Riser Assembly

j. Remove connector link yoke and plate assemblies from bottom connector links.

k. Insert bottom connector links into bottom riser loops.

l. Reinstall yoke and plate assemblies to bottom connector links ensuring knurled portions of plate face up and screwheads face outboard.

m. Remove connector link yoke and plate assemblies from top connector links.

n. Insert top connector links into top riser loops.

o. Reinstall yoke and plate assemblies to top connector links ensuring knurled portions of plate face up and screwheads face outboard.

p. Perform suspension line continuity check (Figure 1). (QA)

NOTE

Top right connector link will be torqued after attachment of spreading gun firing lanyard.

q. Tighten screws on top left and bottom connector links to a torque value of 20 to 25 in-lbs. (QA)

r. Apply torque seal to each connector link screwhead.

s. Using a bodkin or equal tool, insert and pull release lanyard pull loops thru a proper lanyard flute. Pull loops should extend completely thru flute with top of loops butted up against lower edge of flute.

t. Remove temporary locking pins from last four-line release daisy chains.

u. Tack release lanyard to flute with one turn of size FF thread, single and waxed. Tacking shall pass thru outer cover of flute, thru the release lanyard, thru and around last daisy chain loop, and then back thru flute; tie off.

v. With lanyard pull loop fully extended, tack risers together. Tack at center of riser and 1/2-in. above bottom of lanyard pull loop with one turn of size FF thread, single and waxed; tie off. (QA)

w. Reinstall parachute harness sensing release units per WP 024 02.

x. Reinstall ripcord assembly per Paragraph 10.

y. Mark date placed in service on identification and service life label. Make required entries on Parachute Record (OPNAV 4790/101). (QA)

8. LENGTH EXTENSION OF THE SHOULDER RESTRAINT STRAPS.

Materials Required

Specification or Part Number	Nomenclature
PIA-W-4088	Webbing, Nylon, Type XXVII, Class 1 or 1A
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

a. Remove left hand riser from parachute canopy by:

(1) Remove connector link yoke and plate assemblies.

(2) Slide riser loops off connector link bars.

(3) Reinstall yoke and plate assemblies.

b. Remove release assembly from riser.

c. Remove ripcord assembly from left riser assembly.

d. Cut and remove stitching that secures shoulder harness fitting to shoulder restraint strap.

e. Remove shoulder harness fitting from shoulder restraint strap. Ensure location of restrictor strap is maintained on fitting.

f. From the riser release fitting assembly loop end, measure and mark shoulder restraint strap at 12-in. At 12-in. mark, cut and sear shoulder restraint strap webbing. Avoid forming sharp edges while hot knifing and searing.

g. Cut a new 14-in. length of webbing. Sears ends. Avoid forming sharp edges while hot knifing and searing.

h. Install shoulder harness fitting at center point of the 14-in. length of webbing.

i. Fold 14-in. length of webbing in half (7-in.).

j. Place folded 14-in. webbing 3 1/2-in. down each side of cut shoulder restaint strap. (The riser restraint strap (12-in. length) is sandwiched between the folded 14-in. webbing.) Ensure restrictor strap is located correctly and shoulder harness fitting offset is facing down. (If swivel shoulder release is used, offset is not applicable.)

k. Ensure total length of shoulder restraint webbing is 14 1/2-in. from loop end of riser release fitting assembly to end of shoulder restraint strap webbing.

l. Sew lengthwise with size 6 thread, using a 4-point cross-stitch pattern (WP 004 00), 5-in. long, 1/8-in. from edge.

m. Inspect for correct length of shoulder restraint strap, 14 1/2-in. ± 1/4-in. (Figure 4). (QA)

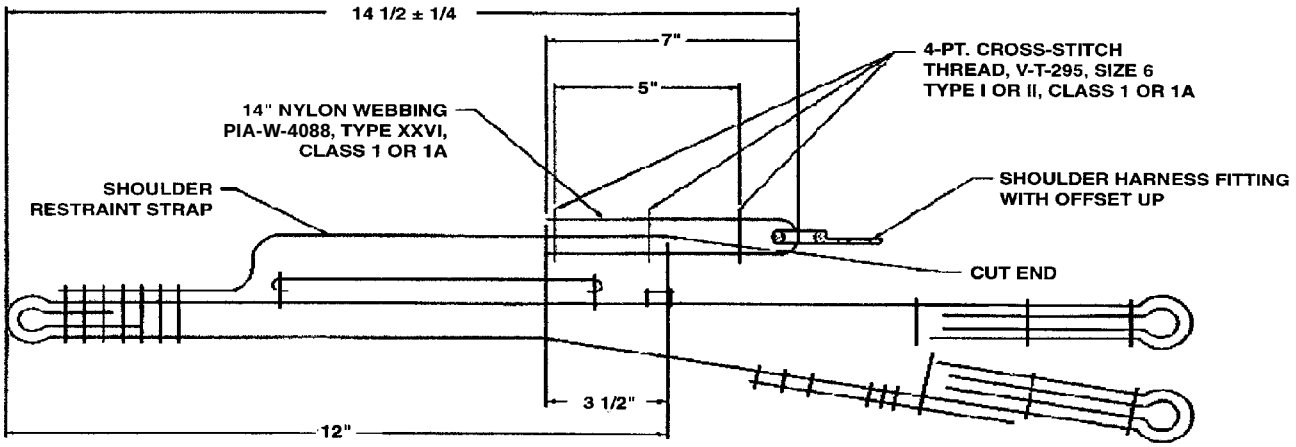

Figure 4. Modified Riser Length

n. Remove right hand riser from parachute canopy by:

(1) Remove connector link yoke and plate assemblies.

(2) Slide riser loops off connector link bars.

(3) Reinstall yoke and plate assemblies.

o. Remove release assembly from riser.

p. Repeat steps d through m. Step j, ensure that the shoulder harness fitting offset is facing up on the right hand riser. (If the swivel shoulder release fitting is used, offset is not applicable.) (Figure 5).

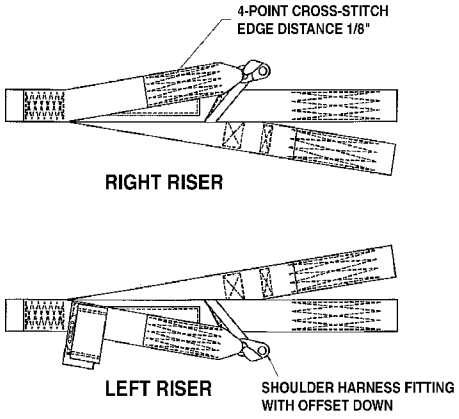

Figure 5. Harness Fitting Offset

9. REPAIR OF RIPCORD ASSEMBLY.

a. Repair of the ripcord assembly is limited to the following:

(1) Cleaning contaminated areas per WP 004 00.

(2) Replacement of loose or broken tackings per WP 020 01.

b. Replace ripcord assembly for any of the following:

(1) Bent, broken, or cracked locking pins.

(2) Corroded, frayed, or permanently bent cable.

(3) Loose cable swage ball or housing ferrule.

(4) Corroded, cracked, or bent handle or housing.

10. REPLACEMENT OF RIPCORD ASSEMBLY.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size E, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Completely remove ripcord assembly and tacking from webbing loop.

b. Insert and withdraw ripcord grip in ripcord retainer five times.

c. Inspect replacement ripcord assembly per WP 020 02.

d. Attach a spring scale to ripcord grip using a nylon cord.

e. Using a straight steady pull, remove grip from retainer. The force required to remove grip from retainer shall be 15 ±5 lbs. (QA)

NOTE

If not within limits, use pliers to adjust ripcord grip. (Ensure plier jaws are covered with protective material.)

f. Insert ripcord housing clip into webbing loop attached to riser and then ripcord grip into retainer (Figure 6).

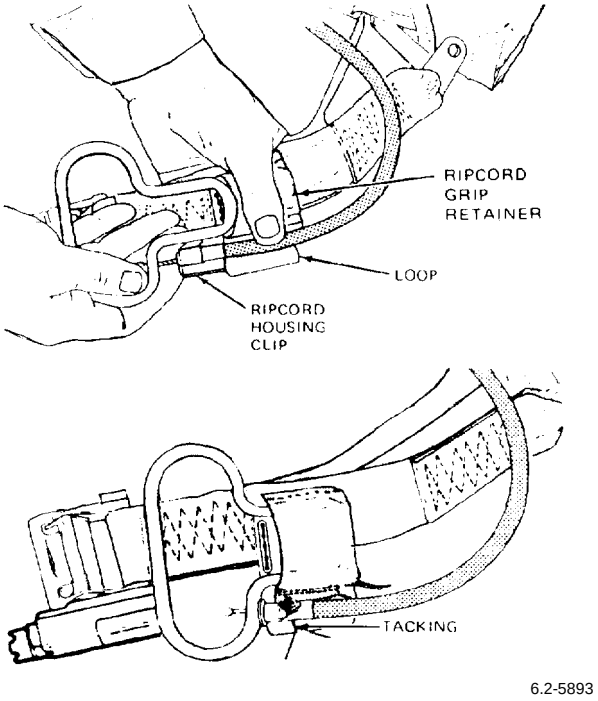

Figure 6. Ripcord Assembly Replacement

g. Tack thru loop and thru hole in ripcord housing clip with one turn of size E thread, single and waxed; tie off.

11. REPLACEMENT OF RIPCORD GRIP RETAINER.

Support Equipment Required

Part Number	Nomenclature
DPP-50	Scale, Spring

Materials Required

Specification or Part Number	Nomenclature
60A116C10-1	Retainer, Ripcord Grip
V-T-295	Thread, Nylon, Size E, Type I or II, Class A
V-T-295	Thread, Nylon Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Remove retainer cover stitching and expose ripcord grip retainer.

b. Remove ripcord grip retainer and stitching from riser.

c. Position replacement retainer is same location as removed retainer and handstitch to riser with size 6 thread, doubled and waxed; tie off.

d. Machine stitch retainer cover back to riser with size E thread.

e. Perform ripcord grip pull test as follows:

(1) Fully seat ripcord grip in ripcord retainer.

(2) Set scale to zero. Attach spring scale to ripcord grip using nylon cord.

(3) Using a straight steady pull, remove grip from retainer. The pull force required to remove grip from retainer shall be 15 ±5 lbs. (QA)

f. If pull force is not within limits, use a pliers to adjust ripcord grip retainers. Ensure plier jaws are covered with protective material. After adjustment, repeat ripcord grip pull test.

12. REPAIR OF CROSS-CONNECTOR STRAPS.

a. Repair of cross-connector straps is limited to cleaning of contaminated areas. Replace cross-connector straps if any other damage exists that may affect the safe operation of the parachute assembly.

13. REPLACEMENT OF CROSS-CONNECTOR STRAPS.

Materials Required

Specification or Part Number	Nomenclature
F-900 Torque Seal (Color Optional)	Sealing Compound

NOTE

For Double "L" Connector Link, refer to Paragraph 26 for disassembly, assembly, and inspection instructions.

a. Remove connector link yoke and plate assemblies.

b. Remove connector links from risers loops and then remove connector straps.

c. Inspect replacement cross-connector straps for contamination, cuts, fraying, burns, loose or broken stitching, and proper length 16 ±1/4-in. unattached.

d. Insert connector links thru loop in each end of connector strap and then thru loop in riser.

e. Reattach yoke and plate assemblies to connector links ensuring knurled portion of plate faces up and screwheads face outboard.

NOTE

Top right connector link will be torqued after attachment of spreading gun firing lanyard.

f. Tighten screws on top left and bottom connector links to a torque value of 20 to 25 in-lbs. (QA)

g. Apply torque seal to each connector link screwhead.

h. Mark date placed in service on identification and service life label. (QA)

14. ATTACHMENT OF RISERS AND CROSS-CONNECTOR STRAPS TO CONNECTOR LINKS.

NOTE

For Double "L" Connector Link, refer to Paragraph 26 for disassembly, assembly, and inspection instructions.

a. Lay out risers and cross-connector straps on packing table below connector links. Riser fasteners shall face up and riser assembly with ripcord assembly shall be on packer's side (Figure 7).

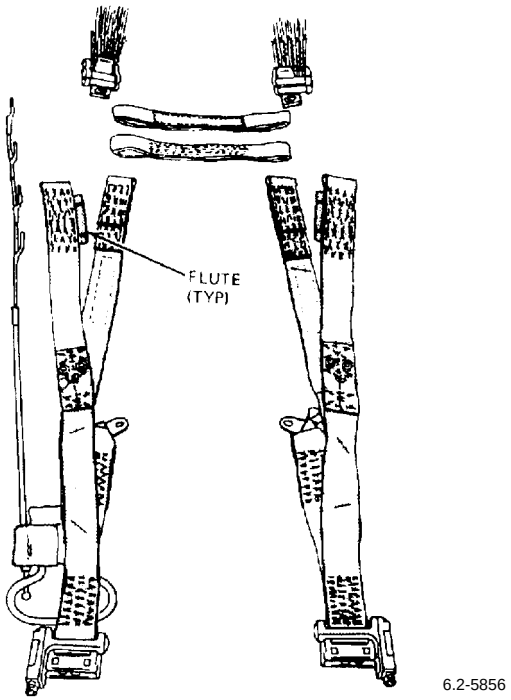

Figure 7. Attachment of Risers and Cross-Connector Straps to Connector Links

b. Remove connector links from tension hooks; then remove tension hooks from packing table.

c. Remove connector link yoke and plate assemblies from bottom connector links.

d. Insert bottom connector links thru respective loops in each cross-connector strap and then thru loops in bottom riser straps.

WARNING

Ensure that suspension line continuity is maintained at all times. Also ensure that the clove-hitch and half-hitch knots at ends of suspension lines have not separated during handling.

e. Reattach yoke and plate assemblies to bottom connector links with knurled plate portions facing up and screwheads facing outboard.

f. Remove connector link yoke and plate assemblies from top connector links.

g. Slide suspension lines onto a temporary locking pin or rod.

h. Insert top connector links thru loop in each end of connector strap and then thru loops in top risers.

i. Reinstall suspension lines 3 thru 7 and 26 thru 22 onto applicable connector link. (QA)

j. Reattach yoke and plate assemblies to top connector links with knurled portions facing up and screwheads facing outboard.

k. Check suspension line continuity on left side of gore 28. Packer shall grasp line 1 at skirt hem and raise to sufficient height to ensure that line is free of dips and twists. Continue procedure with lines 2 thru 14 (Figure 1). Helper shall be positioned at connector links to check lines selected by packer. (QA)

l. Check suspension line continuity on right side of gore 28. Packer shall grasp line 28 at skirt hem and raise to sufficient height to ensure that line is free of dips and twists. Continue procedure with lines 27 thru 15 (Figure 1). Helper shall be positioned at connector links to check lines selected by packer. (QA)

m. Tighten all connector link screwheads except top link on helper's side to a torque value of 20 to 25 in-lbs. (QA)

NOTE

Screwhead on top link of helper's side will be torqued after attachment of spreading gun firing lanyard.

n. Apply torque seal to each connector link screwhead.

15. REPAIR OF CONTAINER ASSEMBLY.

a. Repair of the container assembly is limited to the following:

(1) Cleaning of contaminated areas.

(2) Replacement of grommets, locking cones, snap fasteners, and eyes.

(3) Repair of loose or broken stitching, holes, tears, and seam separations.

b. Replace container for any of the following:

(1) Service/total life has expired per WP 020 02.

(2) Broken or distorted container stiffeners.

(3) Deterioration, fading, abrasion, or excessive contamination.

16. INSTALLATION OF AUTOMATIC PARACHUTE RIPCORD RELEASE POWER AND ARMING CABLE HOUSINGS AND ATTACHMENT OF RELEASE LANYARD.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size E, Type I or II, Class A
V-T-295	Thread, Nylon, Size FF, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Insert automatic ripcord release arming cable housing thru housing port in right side of ripcord release pocket and thru button-hole in container right side flap. Insert automatic ripcord release power cable housing thru right riser slot in end flap (Figure 8). (QA)

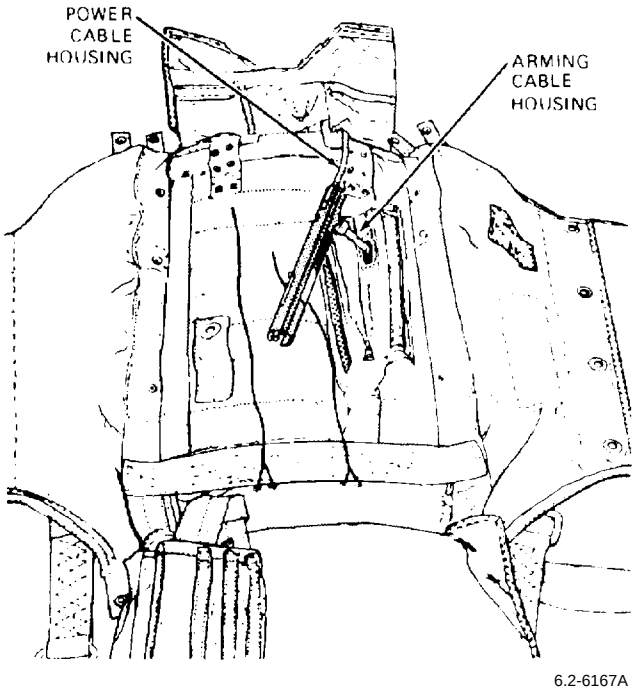

Figure 8. Insert Automatic Ripcord Release Arming Cable Housing

b. Fold top end flap onto container so base plate faces up.

c. Position large slotted end of dual base plate clamp under screwhead on base plate. Position manual ripcord housing and power cable housing under clamp with flat side of each housing positioned against base plate. Engage clamp in clamping groove of two housing ends. Position small slot of dual based plate clamp over base plate stud. Insert release lanyard locking pin into stud hole to secure clamp (Figure 9). (QA)

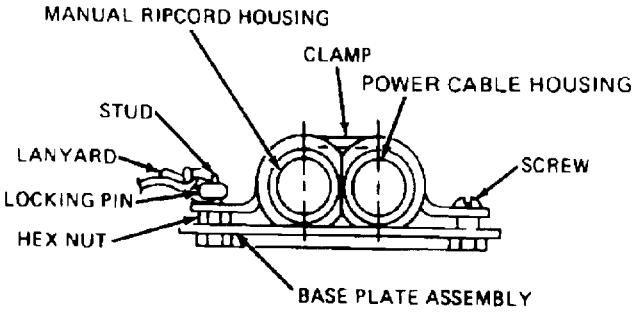

Figure 9. Position Large Slotted End of Dual Base Plate Clamp

d. Safety-tie clamp release lanyard pin to stud with one turn of size FF thread, single and waxed. Passing thread thru lanyard knot; tie off (Figure 10). (QA)

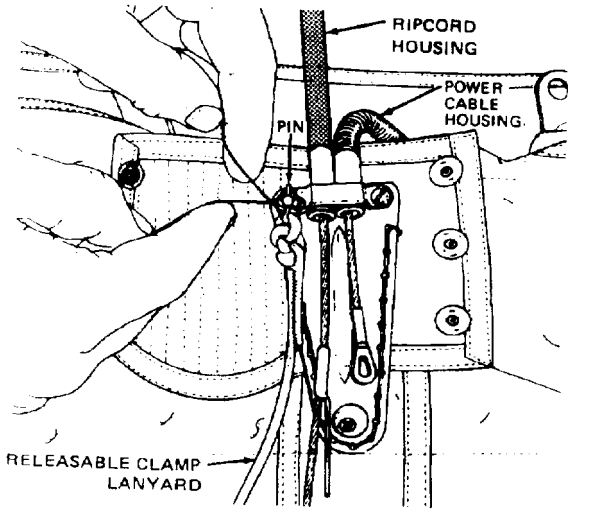

Figure 10. Safety-Tie Clamp Release Lanyard

e. Rotate container end flap with base plate onto packing table. Tack release lanyard to end flap at V with 1/8-in. slack in lanyard between locking pin and tacking. Tack around lanyard, not thru it, using one turn of size E thread, single and waxed; tie off (Figure 11).

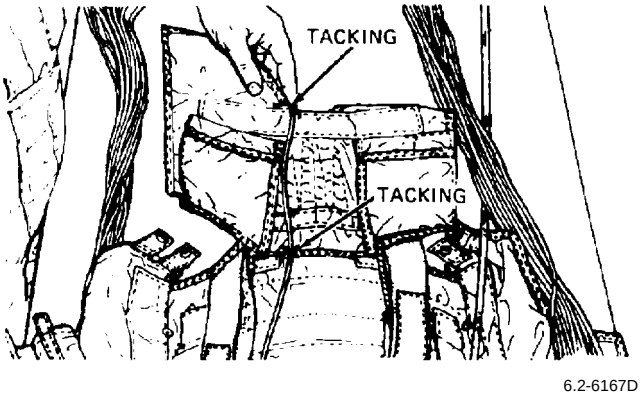

Figure 11. Rotate Container End Flap with Base Plate

f. Route release lanyard along inside of container end flap. Tack release lanyard to upper container edge about 1-in. from left riser slot. Tack around lanyard, not thru it, using one turn of size E thread, single and waxed; tie off.

17. REPLACEMENT OF CLAMP BASE ASSEMBLY AND/OR LOCKING CONE ON CONTAINER TOP FLAP.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Cut and remove stitching retaining base assembly and locking cone from top flap. Remove base assembly and locking cone.

b. If base assembly is to be replaced, remove clamp and screws and retain for reinstallation. If locking cone is to be replaced, leave clamp with ripcord housing/power cable housing attached to base assembly.

c. Using a sufficient length of size 6 thread, doubled and waxed, to complete repair, tie an overhand knot 3 to 4-in. from end of thread for tie-off when stitching is complete.

d. Position replacement base assembly/locking cone in exact location of damaged or missing base assembly/ locking cone. Ensure that ripcord locking pin hole is aligned in same direction as that removed.

e. Start handstitching from inside of container at widest end of base assembly, using a running stitch thru each hole in the base assembly and applicable holes in locking cone. Stitch to last hole in sequence; then stitch back around base assembly to starting hole. Tie off; Trim ends 1/2-in.

f. If base assembly was replaced, reinstall clamp and ripcord housing/power cable housing.

18. REPLACEMENT OF SLIDE FASTENER ON PARARAFT FLAP ASSEMBLY.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size E, Type I or II, Class A
814AS807-1	Slide Fastener

a. Carefully remove stitching holding damaged slide fastener to pararaft flap assembly.

b. Place replacement slide fastener on pararaft flap assembly in the same position as the one removed.

c. Starting with the bottom end of the slide fastener, align the slide fastener tape flush with the edge of the flap assembly and sew with three rows of stitching about 1/8-in. apart.

d. At the top stop end of the slide fastener remove any excess tape and sear.

19. REPLACEMENT OF CONTAINER.

Support Equipment Required

Part Number	Nomenclature
—	Hot Knife

a. Remove back pad and retain for reinstallation.

b. Inspect replacement container per WP 020 02.

WARNING

Do not allow hot nylon drippings or hot ends of nylon webbing to come in contact with skin or clothing.

c. Using a hot knife, cut open the buttonhole on right side of container for the ripcord release arming cable housing.

d. Mark date placed in service on identification and service life label.

e. Reinstall back pad.

20. REPLACEMENT OF LAP BELT ASSEMBLY.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

a. Mark existing lap belt location. Cautiously remove existing stitches which secure the lap belt assembly to the container assembly.

b. Remove lap belt release assembly hardware, and retain. Discard removed lap belt assembly.

c. Position replacement lap belt assembly in same location as that removed. Hand tack in place to hold position while machine stitching (Optional). Stitch in place with size 6 thread, using a 5-point cross-stitch pattern, 4-in. long, two places (Figure 12).

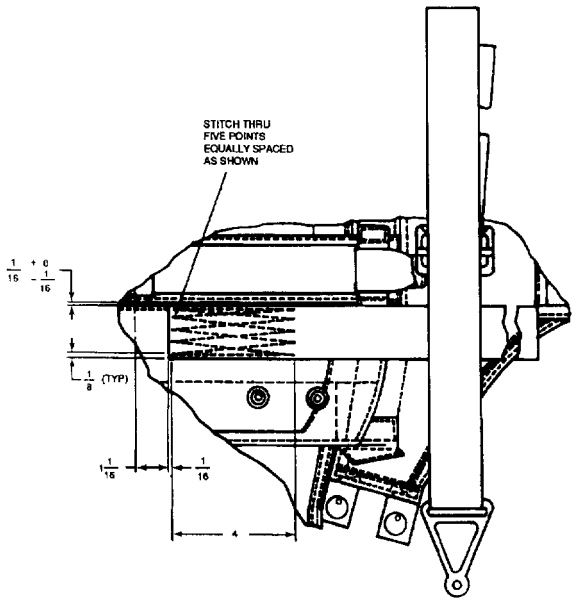

Figure 12. Replacement of Lap Belt Assembly

d. Install removed lap belt release hardware on replaced lap belt assembly. (QA)

21. INSTALLATION OF LAP BELT RELEASE ASSEMBLY.

Materials Required

Specification or Part Number	Nomenclature
MIL-S-22473	Sealing, Compound, Grade H

a. Inspect release assembly for operation, corrosion, burrs, and sharp edges.

b. Insert pin thru lap belt webbing loop (Figure 13).

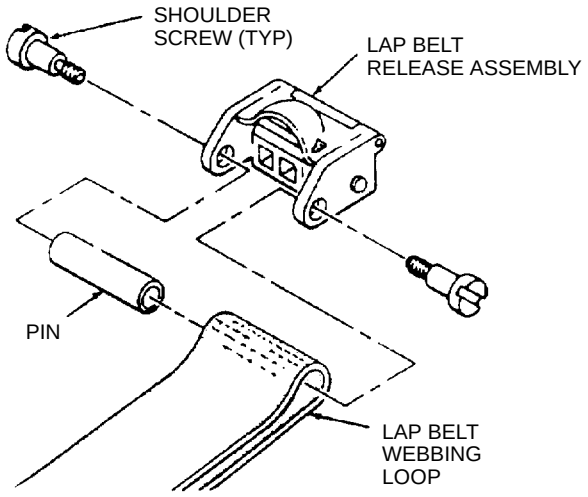

Figure 13. Installation of Lap Belt Release

c. Place lap belt release assembly on lap belt with actuating locking lever facing outboard (Figure 13).

d. Apply sealing compound to threads of two shoulder screws. Install screws thru holes in release assembly and into pin (Figure 13).

22. REPAIR OF BACK PAD.

a. Repair of the back pad is limited to the following:

(1) Cleaning contaminated areas per WP 004 00.

(2) Replacement of snap fasteners per WP 004 00.

(3) Repair of small holes, tears, and loose or broken stitching per WP 004 00.

b. Replace back pad for any holes, tears, or other damage deemed beyond repair.

23. ATTACHMENT OF BACK PAD.

a. Attach back pad to container by securing six back pad keepers to container fasteners.

24. INSTALLATION OF WARNING LABEL ON BACK PAD.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size E, Type I or II, Class A

a. Measure 3 1/4-in. from either edge of back pad and mark.

b. Measure 4 1/2-in. from top and mark.

c. Fold all sides of label under 3/8-in.

d. Place top edge of label on 4 1/2-in. mark and side edge of label on 3 1/4-in. mark.

e. Sew one row of stitches around label 1/8-in. from edge.

f. Reidentify back pad as P/N 60A113D6-7.

25. REPLACEMENT OF SPREADING GUN ANTI-SQUID RETAINER CORD TACKING.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size FF, Type I or II, Class A

a. Remove loose or broken tacking.

b. Tack 18 ±1 1/2-in. from end of sleeve and at end of loop. Use one turn of size FF thread single and waxed, tack thru sleeve anti-squid retainer cord and sleeve; tie off (Figure 14).

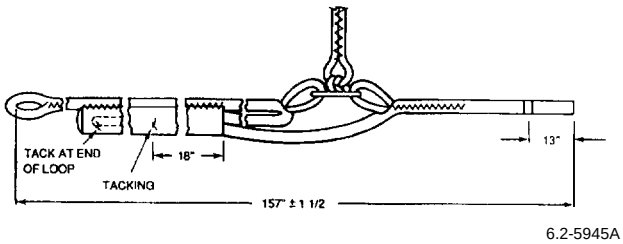

Figure 14. Retainer Cord Tacking

26. REPLACEMENT OF MS22021-1 CONNECTOR LINK (SPEED LINK) WITH MS22002-1 (DOUBLE ”L”) CONNECTOR LINK.

NOTE

New canopies received from supply may have the Double ’L” Connector Links installed.

Instructions for attachment of Firing Lanyards, PDVL’s, Four-Line Release Systems, etc., will remain the same and will be contained in the application parachute manual.

Materials Required

Specification or Nomenclature	Part Number
MS22002-1	Connector Link (Double ”L”)
F-900 Torque Seal (Color Optional)	Sealing Compound
—	Torque Screwdriver
MIL-S-43243 (See WP 002 00)	Separator, Link or Equivalent

a. Remove yoke and plate assembly from parachute connector link, P/N MS22021-1.

b. Slide suspension lines from connector link onto a temporary locking pin or rod.

c. Remove cross-connector strap.

d. Slide riser loop off connector link bar and dispose of connector link, P/N MS22021-1.

e. Remove screws from the double ”L” connector link, P/N MS22002-1 and separate the two halves of the link.

f. It may be necessary to use a separator device to separate the two halves of the connector link if a separator device is not available, loosen both screws of the connector link by four turns. Place a long bar between the connector link bars to hold the link in place. Using a rawhide or rubber mallet, tap one screw head and then the other screw head several times until the connector link bars separate.

g. Install suspension lines on the new connector link bar. The short leg of the ”L” connector is to be positioned to the inside (Figure 15).

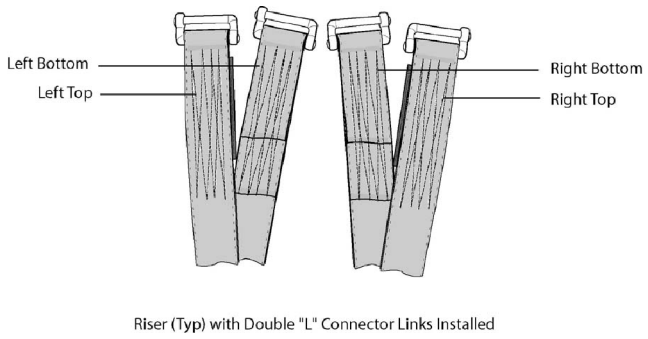

Figure 15. Double “L” Connector Link Layout

h. Install cross-connector strap.

i. Slide riser loop onto opposite connector link bar.

j. Mate both halves of the connector link together.

k. Install screws (2 each).

NOTE

Screws must make a minimum of 6 full turns prior to applying torque.

l. Check suspension line continuity. (QA)

m. Tighten screws to a torque value of 15 in-lbs. (QA)

WARNING

Care must be taken when tightening screws as screwdriver may slip and cause minor injury.

NOTE

It may be necessary to check the torque value on each screw more than once due to the interference fit design feature of the connector link.

n. Apply torque seal to both screw heads and allow to dry before proceeding with remainder of parachute packing.

o. Repeat steps a through l on each riser group.

p. Re-identify the parachute canopy by using an indelible black pen to cross out the existing part number and marking the new superceding part number per Illustrated Parts Breakdown (IPB) WP 020 04.

ORGANIZATIONAL, INTERMEDIATE, AND DEPOT MAINTENANCE

ILLUSTRATED PARTS BREAKDOWN

NES-25A PERSONNEL PARACHUTE ASSEMBLY

PART NO. 926AS104-6

List of Effective Work Package Pages

Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.	Page No.	Chg. No.
1	11	2 thru 6	9				

Reference Material

Alphabetical Index

List of Figures

Record of Applicable Technical Directives

None

1. INTRODUCTION.

a. This Work Package (WP) contains information for ordering and identifying parts for the NES-25A Personnel Parachute Assembly (Figure 1).

2. USABLE ON CODES.

a. The usable on codes in this WP refer to the aircraft applications for the NES-25A Personnel Parachute Assembly.

b. The following usable on codes apply to this WP.

A - T-2

3. SERVICE/TOTAL LIFE.

a. The service/total life information is contained in WP 020 02.

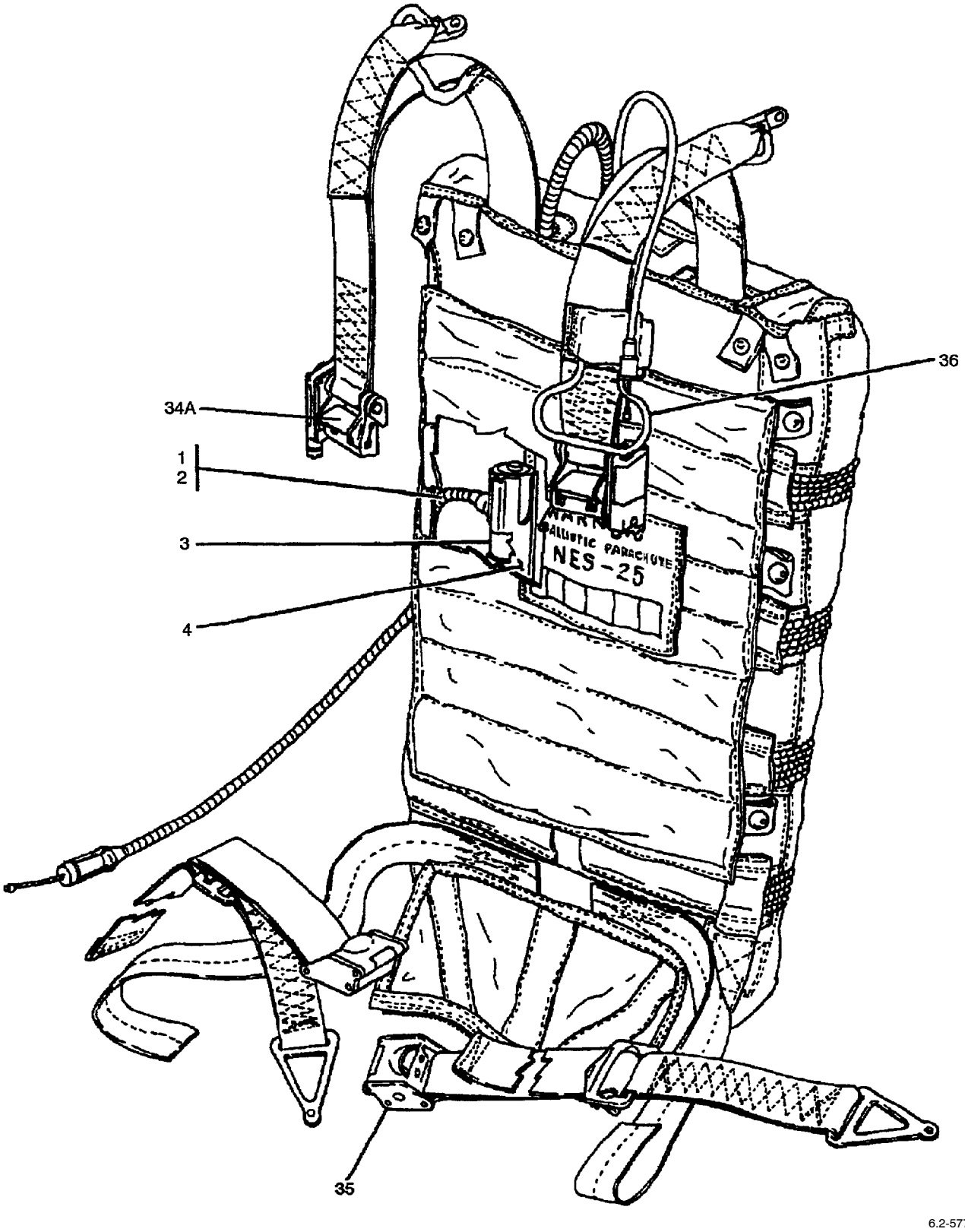

Figure 1. NES-25A Personnel Parachute Assembly (Sheet 1 of 5)

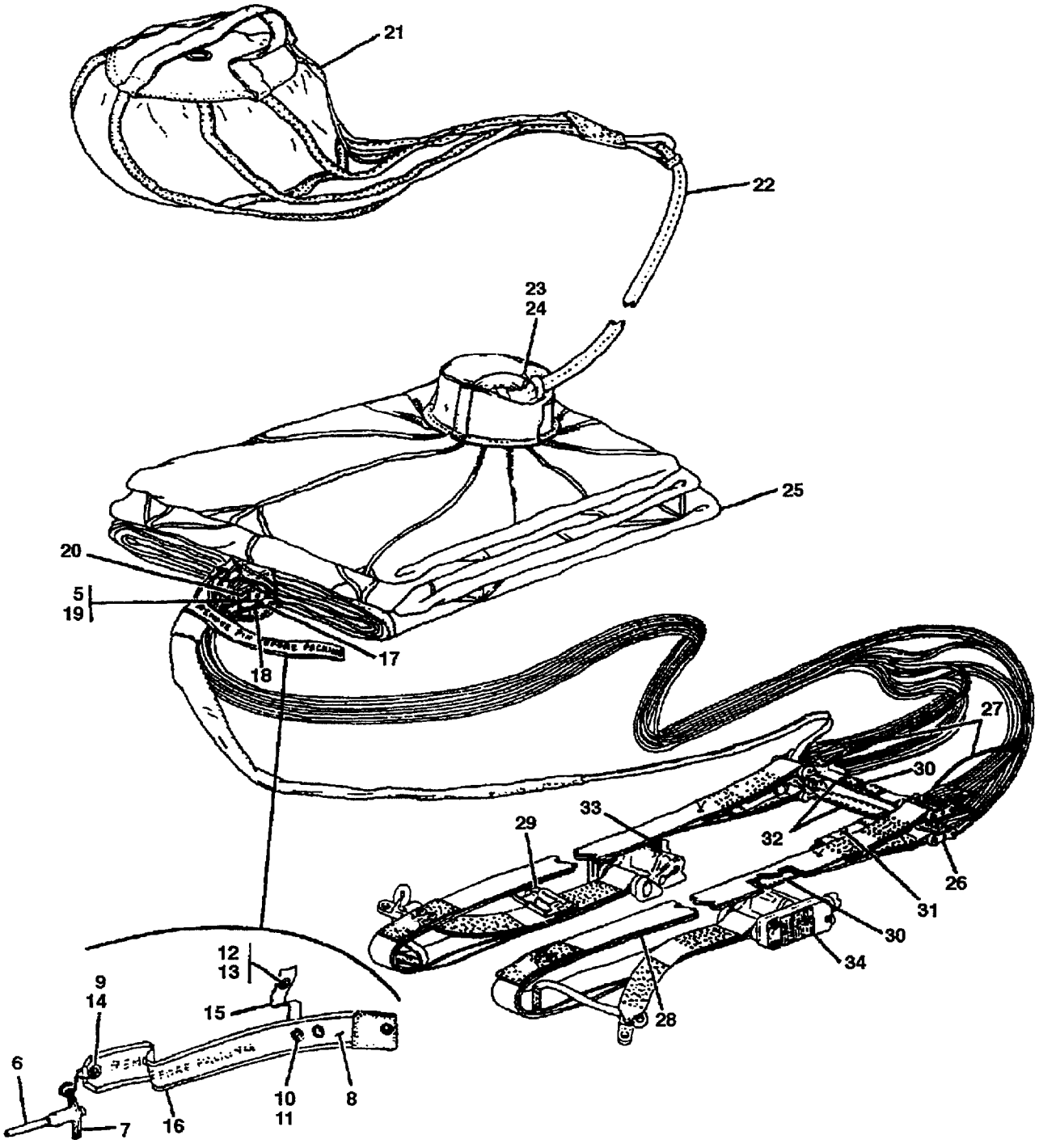

Figure 1. NES-25A Personnel Parachute Assembly (Sheet 2 of 5)

INDEX NO.	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	UNITS PER ASSY	USABLE ON CODE	SM&R CODE
	926AS104-6	PARACHUTE ASSEMBLY, COMPLETE, NES-25A .	1	A	AGOGG
1	711-07025	. HOUSING, ARMING CABLE /52497/	1		PAGZZ
2	711-07026	. CABLE, ARMING /52497/	1		PAGZZ
3	851AS100	. CARTRIDGE, DELAY, CCU-59A (MF 37)	1		PCGZA
4	711-07022-34	. RELEASE, AUTOMATIC PARACHUTE . . . . . RIPCORD MOD 7000 /52497/	1		PAGDD
	711-07022-30	. RELEASE, AUTOMATIC PARACHUTE . . . . . RIPCORD MOD 7000 /52497/ (USE UNTIL EXHAUSTED)	1		PAGDD
5	SK86-0051-13	. GUN ASSEMBLY, SPREADING /24632/	1	*	PAGGD
	SK86-0051-11	. GUN ASSEMBLY, SPREADING /24632/ . . . . . (USE UNTIL EXHAUSTED)	1	*	PAGGD
6	SK86-0089-1	. . SAFETY PIN ASSEMBLY /24632/	1		PAGGG
7	CL3BLPT1005	. . . PIN, QUICK RELEASE /99862/	1	*	PAGZZ
	MS17985C310	. . . PIN, QUICK RELEASE	1	*	PAGZZ
8	39768	. . . FLAG ASSEMBLY /89771/	1		MGGGG
9	MS20230B10	. . . . GROMMET ASSEMBLY	1		PAGZZ
10	MS27983-4	. . . . EYELET	2		PAGZZ
11	MS27983-3	. . . . STUD	21		PAGZZ
12	MS27983-2N	. . . . SOCKET	14		PAGZZ
13	MS27983-1	. . . . BUTTON	14		PAGZZ
14	39768-3	. . . . WASHER /89771/	1		MGGZZ
15	39768-2	. . . . STRAP /89771/	1		MGGZZ
16	39768-1	. . . . FLAG /89771/	1		MGGZZ
17	472P215D017-7	. . MOUNT, CANOPY /24632/	14		PAGZZ
18	LKD7F52Z5	. . SCREW /26304/	28		PAGZZ
19	825AS100	. CARTRIDGE, IMPULSE CCU-33/B (MF-78)	1		PCGZA
20	MS16555-630	. PIN, STRAIGHT HEAD	1		PAGZZ
21	608AS110-1	. PARACHUTE ASSEMBLY, PILOT	1		PCGGG
22	926AS102-1	. BRIDLE ASSEMBLY, PILOT PARACHUTE	1		PCGZZ
23	702AS100-1	. SLEEVE/MAKE FROM M22129-01-N . . . . . /NOTE 1/	1		PCGZZ
24	SK128-001-013-2	. CORD, RETAINER, ANTI-SQUID /24632/	1		MDGZZ
25	107AS106-22	. CANOPY ASSEMBLY	1	*	PCGGG
	107AS106-24	. CANOPY ASSEMBLY (WITH DOUBLE "L" . . . . CONNECTOR LINK INSTALLED)	1	*	PCGGG
26	MS22021-1	. . LINK, REMOVABLE CONNECTOR	4	*	PAGZZ
	MS22002-1	. . CONNECTOR LINK (DOUBLE "L")	4	*	PAGZZ
27	666AS101-2	. . LANYARD, FOUR-LINE RELEASE	2		MGGZZ
28	60A116E7-16	. RISER ASSEMBLY	1		PCGGG
29	60A116C10-1	. . RETAINER, RIPCORD GRIP	1		PAGZZ
30	676AS100-1	. . LABEL	5		MDGZZ
31	666AS102-5	. . FLUTE, FOUR-LINE RELEASE . . . . . LANYARD	2		MGGZZ
32	677AS100-2	. STRAP, CONNECTOR	2		PCGGG
33	852AS117-3	SENSING RELEASE UNIT, PARACHUTE . . . . . HARNESS MXU-746/P LEFT SIDE	1		AGGGG
34	852AS117-4	SENSING RELEASE UNIT, PARACHUTE . . . . . HARNESS MXU-747/P RIGHT SIDE	1		AGGGG

Figure 1. NES-25A Personnel Parachute Assembly (Sheet 3 of 5)

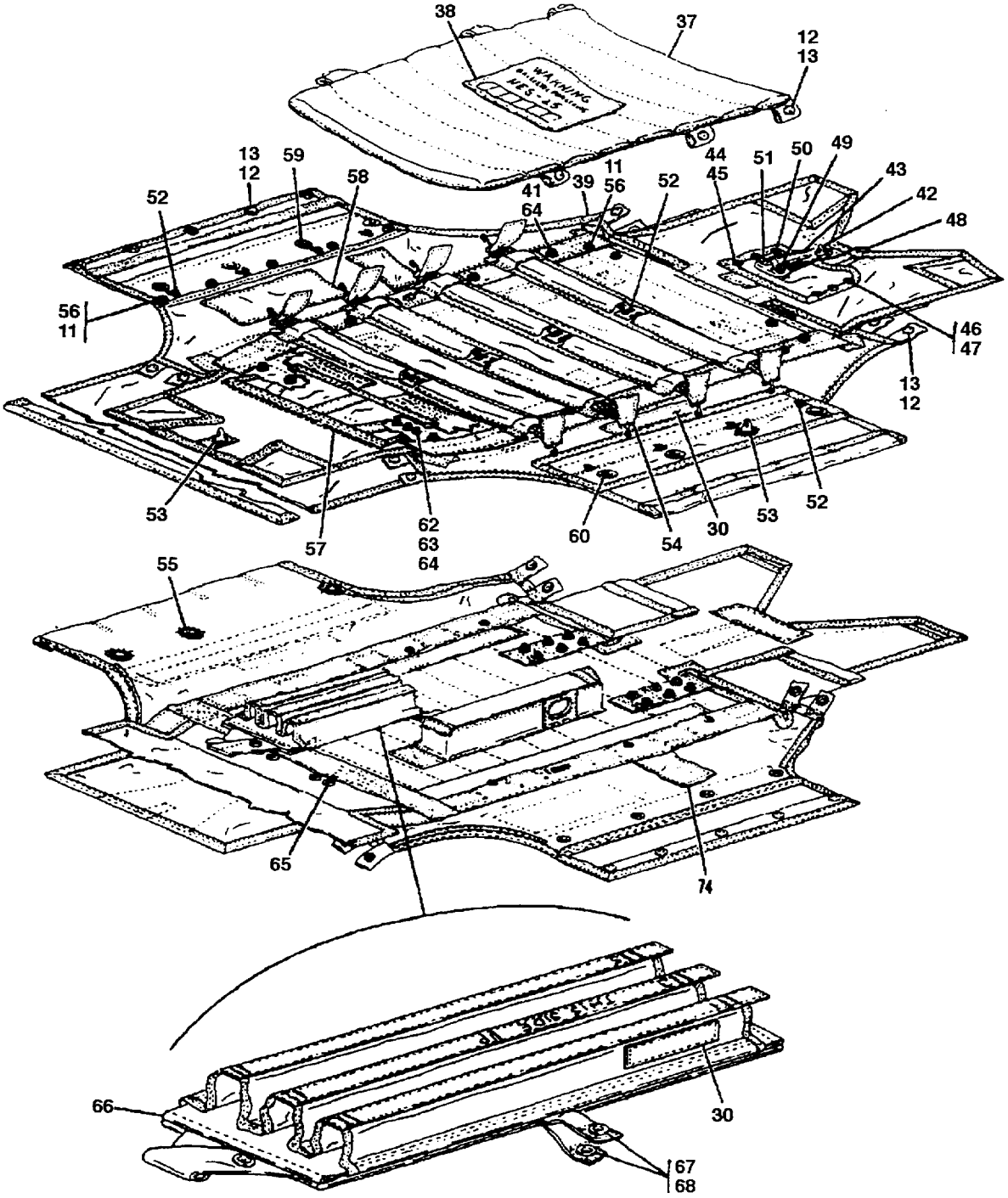

Figure 1. NES-25A Personnel Parachute Assembly (Sheet 4 of 5)

INDEX NO.	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	UNITS PER ASSY	USABLE ON CODE	SM&R CODE
34A	990055-1	. RELEASE ASSEMBLY, CANOPY /99449/	2	*	PAGZZ
	015-10307-5	. RELEASE ASSEMBLY, CANOPY /99449/ (USE UNTIL EXHAUSTED)	2	*	PAGZZ
35	1979AS826-1	. RELEASE ASSEMBLY, LAP BELT /30003/	2	*	PAOZZ
	990060-1	. RELEASE ASSEMBLY, LAP BELT /99449/	2	*	PAOZZ
	015-11365-1	. RELEASE ASSEMBLY, LAP BELT /99449/ USE UNTIL EXHAUSTED	2		PAOZZ
36	60A116C5-5	. RIPCORD ASSEMBLY, PARACHUTE	1		PAGZZ
37	60A113D6-1	. PAD ASSEMBLY, BACK	1		PAOGG
38	510AS126-3	. . LABEL, WARNING	1		MDGZZ
39	926AS101-55	. CONTAINER ASSEMBLY	1		PCGGG
49	60A116C12-6	. . LAP BELT ASSEMBLY	1		PCGZZ
41	MS27980-10B	. . FASTENER, EYELET	6		PAGZZ
42	60A113C24-1	. . CONE, 0.410 GRIP	1		PAGZZ
43	60A113D16-1	. . BASE ASSEMBLY, CLAMP	1		PAGZZ
44	MS27981-5B	. . FASTENER, EYELET	3		PAGZZ
45	MS27981-4B	. . FASTENER, STUD	3		PAGZZ
46	MS27981-1B	. . FASTENER, BUTTON	3		PAGZZ
47	MS27981-3B	. . FASTENER, SOCKET	3		PAGZZ
48	60A116D26-2	. . LANYARD	1		PCGGG
49	60A116C25-1	. . STUD	1		PAGZZ
50	60A116C27-1	. . CLAMP, DOUBLE	1		PAGZZ
51	60A116C28-1	. . SCREW, SHOULDER	1		PAGZZ
52	60A113C28-1	. . EYE	16		PAGZZ
53	60A113C31-1	. . CONE, 0.338 GRIP	2		PAGZZ
54	60A113C25-1	. . WASHER, GROMMET	3		PAGZZ
55	MS22048GC1	. . GROMMET	3		PAGZZ
56	MS27980-8B	. . FASTENER, EYELET	13		PAGZZ
57	814AS807-1	. . FASTENER, SLIDE	1		PAGZZ
58	585AS100-1	. . LABEL, PARACHUTE ASSEMBLY	1		MDGZZ
59	MS22048C2	. . GROMMET AND WASHER, PARACHUTE PACK	4		PAGZZ
60	60A113D11-3	. . SPRING ASSEMBLY, CONTAINER OPENING	2	*	PAOZZ
	MS70105-7	. . SPRING ASSEMBLY, CONTAINER OPENING	2	*	PAOZZ
61	107AS102-1	. . LABEL, WARNING	2		MDGZZ
62	AN3-4A	. . BOLT	2		PAGZZ
63	AN960C10L	. . WASHER, FLAT	2		PAGZZ
64	MS20364-1032A	. . NUT, SELF-LOCKING	2		PAGZZ
65	MS20230-BP20	. . GROMMET ASSEMBLY	4		PAGZZ
66	608AS104-1	. . SLEEVE, LINE STOWAGE ASSEMBLY	1		PAGGG
67	MS20230BG20	. . . GROMMET	3		PAGZZ
68	MS20230WB20	. . . WASHER	3		PAGZZ

NOTES: 1. Make from M22129-01-N insulation sleeving, NIIN 00-899-6650 (size 0.020-in. wall x 0.30-in. ID x 6.0-in. long).

Figure 1. NES-25A Personnel Parachute Assembly (Sheet 5 of 5)